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FORMALISM IN DEFINING HIGH-SCHOOL UNITS

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There is grave danger that our effort to standardize high schools in this country will lead us into a formal evaluation of school work which in the long run will utterly defeat the purposes for which the principle of standardization was evolved. There is a natural psychological reason for the tendency to gravitate toward quantitative formalism. It is easy to determine how many hours a high-school student has attended classes; it is well-nigh impossible to find out what kind of mental processes he has developed during these hours. We hold fast, therefore, to the requirement that he attend classes regularly and we neglect to inquire about his intellectual habits.

It will be answered at once by those who look on the "unit" as an established standard that the consideration of intellectual habits and mental processes is the task of the teacher. The unit is an administrative device; it is not intended in requiring so and so many units to interfere with the teacher's function of producing a high quality of scholarship. Indeed, it will be further urged, there are other safeguards, such as entrance examinations and inspections, which are organized for the purpose of compelling the teacher or aiding the teacher, as the case may be, to maintain a high quality of work.

In spite of these safeguards, however, it can be shown that the natural drift toward quantitative formalism is making it more and more difficult for the teacher to produce a high quality of work. The number of credits which a student presents is so important in many connections that the kind of unit is not thought of seriously. It is further the thesis of this paper that a positive and energetic campaign should be organized to counteract this drift toward formalism.

The present situation will be most clearly set forth if we consider briefly the steps by which we have come to the point at which we now stand.

The most influential forces in defining a unit are the Report of the Committee of Ten, the Standards of the North Central Association, and the Standards of the Carnegie Foundation. Other agencies have contributed to the solidification of the definition of a unit, but these three institutions are of leading importance.

The Report of the Committee of Ten speaks of fifteen hours a week as the normal quota of work for a high-school student. Twenty hours is mentioned as an exceptional program. This means that a student who graduated from the high-school course twenty years ago would have to his credit twelve units as a normal basis for graduation and for admission to college. The amount of work expected of a student pursuing only three courses is in sharp contrast with the amount which a student could take in each of his courses under later definitions of a unit.

In its fourth annual report the Carnegie Foundation laid down the following definition: "A unit represents a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work." Here we see that twenty periods a week is set up as a normal program. It was doubtless thought that this requirement meant more work on the part of high-school students. It does not follow, however, that a student taking four units a year is any more industrious than a student taking three units. On the other hand, it is absolutely certain that teachers and students alike will face their tasks in an entirely different spirit when they know that the program of the week is long and scatters over a great variety of subjects.

The definition of the North Central Association avoids any reference to the other units taken in the year; that is, the Association permits less than one-fourth of a year's work to constitute a unit. The Association's definition is as follows: "A unit course of study in a secondary school is defined as a course covering an academic year that shall include in the aggregate not less than the equivalent of one hundred and twenty sixty-minute hours of classroom work" (2, p. 67).

The Association explicitly recognizes that this definition does not agree with the Carnegie unit, for the statement is included in the Standards: "More than twenty periods per week should be discouraged."

This series of definitions makes it clear that there has been a rapid quantitative expansion of the high-school course. The colleges have contributed to this expansion by their requirements for admission. They have asked for fifteen units and they have asked for a great variety of subjects. When they began to require fifteen units for admission it was at once evident that the minimum which could be taken by any given student in at least three years of his course is twenty hours a week instead of the fifteen which was constantly in the mind of the Committee of Ten. Furthermore, the ordinary student believes that he must provide in his course for the emergency of failure. He finds that losing one or two courses during the four years of his attendance in the high school will jeopardize his graduation and admission to college. He consequently elects more work than is absolutely required in order to make perfectly certain that he will get the requisite number of credits.

There is another motive which is equally strong, namely, the motive of satisfying the double requirements of the high school for graduation and the college for admission. In some cases these two sets of requirements do not coincide. Consequently the student who wishes to go to college finds it necessary to take some additional courses in order to meet the special requirements of the institution which he expects to attend. This conflict between the demands for the high-school course and the college is still further exaggerated by the fact that the student may determine late in the

high-school course which college he is to attend. He finds in his Junior or Senior year that he has not provided all of the units required by his chosen institution, and again he must make up for his late decision by pursuing more units than the normal.

These and a great variety of personal considerations which might be enumerated have brought it about that students not infrequently pursue in their high-school courses as many as five units instead of the four which have come to be the minimum. This means that the number of periods of work pursued each week is from twenty to twenty-five in the case of many students. Furthermore, it will be remembered that the weaker students are the ones who commonly find it necessary to take the maximum number of hours.

What effect does this large number of hours have upon the work of each individual course? Evidently the organization of the school will have to take cognizance of the great variety of courses being carried by an individual student. In the early days of high-school organization, when the Committee of Ten assumed fifteen hours a week of work, it was reasonable to expect that the individual student would do in each course a great deal of outside work. It was reasonable to assume that a long lesson could be assigned in view of the fact that the student had only two other lessons to prepare on that day. But now the demands have increased, and since the student has to prepare five lessons, or at least four, the individual instructor finds himself embarrassed in assigning the amount of work which was commonly assigned twenty years ago in any single course. The discussions of home study make it perfectly clear that students find the burden of preparation in some schools very heavy. We shall have occasion later to refer to the other considerations which surround home work. Attention is called at this point merely to the fact that the alternative lies before the teacher of demanding more outside work of the student who is pursuing four or five units, or of lowering the standard of the course so as not to include as much material as was once common in the days when students had only three courses. We see, accordingly, that the increase in the number of courses has produced as its inevitable consequence a reduction in the amount of

work which is done in each one of the courses. There can be no doubt that the show which the colleges have made of increasing their apparent standards by increasing the number of courses has in many cases at least merely redistributed the energy of students without actually producing the supposed result of more work.

A second type of considerations which immediately arise will be found in the fluctuations which are accepted in the grades given to students and the amount of work which will be accepted for a pass in a given course. Two familiar facts are here pertinent: In the first place, the constituency of the high school has changed very greatly in the last two decades. From a small institution attended by a selected group of students, all of whom were looking forward to one of the professional careers and many of whom were expecting to teach, a high school has expanded into a cosmopolitan institution attended by all classes of students. The instructor now finds that he must deal with students who are not especially interested in the subject for vocational reasons, and he can enforce his scholastic requirements only up to the point which is reasonable in view of the heterogeneous character of the population of the high school.

In the second place, the variety of courses offered in the schools in response to the demands of this new constituency is one of the most impressive facts in our present-day school organization. This variety we have not yet mastered. We cannot escape the conviction that there is a great difference between a standard in mathematics and in manual training, between Latin and English literature, and between public speaking and science. Since these standards are so various, the instructor hesitates to fail a student because he does not comply with the expectations of his particular department. Failure in this case might mean that the department would not be popular in the school. It might lose some of the elections which it desires in order to keep up its numbers. It might find itself dealing with students in a fashion wholly different from that exhibited by other departments, and so might be open to censure in faculty councils as well as in the opinion of students. The result is that there is a strong temptation to allow a wide range of variation in the work demanded for the passing of a course.

Passing of a course is looked upon in many schools as a kind of concession which can be permitted without reference to the grading system in general. The teacher will indicate frankly that he is quite willing to let such and such a student go through the school and graduate, but he would not recommend him for college-entrance examinations and he would not think of certificating him for college. In fact, several of the accrediting agencies of the country have recognized this distinction with perfect clearness and have asked school principals to distinguish between the students whose work is of such a character as to justify the expectation that they ought to continue in higher schools and those who merely pass for purposes of graduation from the high school. This kind of distinction has been growing rather than diminishing. In fact, it may be said that there is less effort today to eliminate students than ever before. It cannot be argued that this tendency to avoid the elimination of students is wholly bad, but if the high school has to recognize this wider range of variations the quantitative definition of the unit is evidently becoming increasingly difficult to maintain. A teacher cannot have all kinds of students in his class, with all sorts of intellectual ambitions, and administer his course with the same straightforward singleness of purpose that characterized his work twenty-five years ago.

Another influence which is tending to make impossible uniformity in the definition of a unit grows out of the fact that the elective system has redistributed the courses in such a way that it is now quite impossible to distinguish sharply between those courses which are administered in the earlier part of the curriculum and those which come late in the student's high-school career. When the curriculum was a required curriculum it was relatively easy to adjust the work of any given subject to the demand of the particular students who were expected in that course. The first-year Latin course was intended for Freshmen, and the demand made upon Freshmen was adjusted to their intellectual maturity and to the other required subjects which they were taking up parallel with their Latin. The student was expected to advance regularly from this first-year work to the work of the later years in his course. But with the introduction of the elective system a great change

has come in this matter. A few of the courses, such as Latin, English, and mathematics, continue to have a relatively sharp distinction between the work of the early years and the work of the later years of the curriculum. But this distinction does not obtain for science work, for history, and for the modern languages. A student may decide to take the first course in French when he is a Junior or he may decide to take only one year of French and may place this in his Senior year. Science is very commonly not open to students in the Freshman year, but is equally open to all members of the three later classes. And so on through the list one may enumerate the different adjustments which have been made, permitting students of all years to mix in a single course.

This mixture of students of different degrees of maturity operates to break down the unity of the course. The teacher hardly feels justified in applying the same measuring rod to the Freshmen and Seniors in his class, with the result that the range of work accepted differs greatly in different individuals. But above and beyond this mere variation within the course appears the fundamental fact that it is quite impossible to conduct a course of this type, including students of all of the different classes, in the way in which the course could be conducted if the students were homogeneous. For example, let us assume the case of a German class made up in part of students who have studied Latin and in part of students who have not taken Latin. Add to this the fact that some of these students have pursued two years of rhetoric and English while others have pursued three years of the English courses and still others have taken only the English given in the elementary schools. All of these students in German encounter certain matters of rhetoric and certain matters of grammatical construction which are necessary to the proper development of the German course itself. The instructor must either throw upon the individual student the responsibility of getting through by doing privately work which he has not had in regular courses, or else the class must review these fundamental considerations as a part of the German course. In either case the definition of the unit is made more and more difficult by the alternatives which are presented to the German teacher of conducting his course adequately under conditions

that present to him a very heterogeneous group of students. It becomes necessary for such an association as the North Central Association to consider seriously the grading of courses which are given in the elementary years and those which are given in the advanced years of the high-school course. The definition of the unit will undoubtedly have to take into account such distinctions as these. It is not enough to say of the unit that it is a year of work. The question is, Which year of work is it?

In the fourth place, there is the widest variation in the amount of work done by students in addition to the classroom work. Here again a great social change has been going on very rapidly in the high school. There are many students who find themselves absorbed in social engagements of various types and these students unquestionably are handicapped in the intellectual work which they are supposed to be doing in the high school. Again, it is not our business at the present moment to determine the proper ratio of outside activity and purely scholastic work in the high school. The fact is that a great deal of social activity is regarded as legitimate at the present time by most of those who are in charge of high schools and colleges. The result of this outside work is esteemed by the student and his family to be quite as important for his individual life as the outcome of his scholastic endeavors. The majority of high-school students are so clear on this matter that if they were consulted, and furthermore if their families were consulted, one would hear the judgment that social activities and athletic activities are more important than a great share of the scholastic work of the school. One could base on these considerations a strong argument for the recognition through the school of many activities that at the present moment are regarded as wholly outside activities. If the school is going to train its students properly, and if the community believes that a part of this proper training lies in dances, receptions, and athletic activities, why should not the school organize these activities as a part of the regular training of students? The mere statement that the work is different from the ordinary scholastic work does not free the agents of society who are training these young people from the responsibility of finding out what value these outside activities

have for the improvement of students. In a certain sense the school has long recognized the logic of this argument. Social activities are not neglected as a matter of fact in most high schools. Even though they stand outside the circle of required courses and even though the social activities are not supervised directly by instructors, the influence of these social activities is explicitly recognized. The social activities are taken into account in every assignment. Every teacher knows perfectly well that he cannot expect the amount of time which he otherwise would command because the leading members of the class are engaged in dramatics, in receptions, in athletics, and other forms of occupation which the community and the school recognize as perfectly legitimate. In fact, the instructor who is not obliged to recognize forms of activity which he himself regards as illegitimate is an extraordinarily fortunate member of the educational fraternity. It is just this lack of definition of what is legitimate and what is not legitimate which makes one uneasy in his definition of the unit. A unit no longer commands a clearly stated part of the student's time. The unit certainly does not receive one-third of a student's intellectual and physical energy in the course of a year. It does not even command one-fourth of the intellectual and physical energy of the student. It probably does not command one-fifth, and one might go on with the speculative fractions in vanishing series, asking how far a unit does succeed in commanding the time and energy of students.

In this state of confusion there is grave danger that we shall not give in many courses enough work for certain of our best students. If a student of set purpose refuses to participate in outside social and athletic activities, preferring to give himself up entirely to specialized training for the profession which he is to enter, should he not be given some scholastic advantage over his fellow who has made up his mind that purely scholastic preparation for a later business or professional career is too limited? If a student wants to elect as part of his course music and drama and art, is it not possible that we ought to accommodate him in this matter? Perhaps we ought to require of him a smaller number of school units. Perhaps, on the other hand, we ought to require him to spend five

years in the school, so that he may get an abundance of the kind of training that he seeks. This would undoubtedly meet with the approval of many students and might meet with the approval of their families. It would at least define the issue with all clearness, and we should come very shortly to a decision on the question of credit to be given for music and other forms of activity. At all events it is folly to shut one's eyes to the fact that the school work of many students is being done in an undefined intellectual and social environment, and the proportion of time and energy which is given to any single course is wholly problematic under present conditions.

We might add as the fifth and sixth considerations those strictly academic considerations which grow out of the training of teachers and the distribution of courses among trained and untrained teachers. It is assumed that five hours of work a week in all high schools constitute a unit, even if the course is under the direction of a college graduate who has done advanced work but knows nothing about how to teach. The same assumption too often holds even when the course is under a college graduate who has no special knowledge of the subject or of teaching. The qualifications of teachers are nowhere standardized. We have no method of training or testing secondary teachers in this country. There is less uniformity among secondary teachers than in the training and examination of elementary teachers. Yet the actual administration of the courses depends so largely upon the ability of these teachers that it is astonishing that we should be at all complacent in the matter of definition of the number of courses when we are so free in employing teachers of the widest variation in native ability and training.

As pointed out above, there is a consideration which grows out of the distribution of courses. Here is a high school which has a single session, doing all of its work during a crowded forenoon and allowing the students to go away for the whole afternoon and allowing them, by virtue of this organization, to direct their own energies during a very large part of the day. In another high school the tradition of the community is such that each student comes to the school early in the morning and with a brief interval at noon stays

until the middle of the afternoon. In some of the technical schools the students stay until late in the afternoon. In these various types of organization the amount of work which can be accomplished is measured only in terms of the single day's exercise, as though that could be isolated from the whole organization of the school. A unit in a well-organized high school is quite as unlike a unit in a badly organized high school as a good piece of legislation in the midst of a well-organized constitution is unlike a single, isolated enactment which has no force because it is not supported by the necessary collateral legislation.

Another conspicuous example of formalism which incumbers present-day organization is that formalism which requires small advanced classes to meet as frequently as large elementary courses. Why should a good teacher who has a class of five in advanced algebra meet that class as often as he meets his elementary class of thirty and then give to the student who gets 90 in one course the same credit as he gives the student who gets 90 in the other course? What we need is a study of high-school courses which will equate courses.

Many a reader of the foregoing criticism of a unit will doubtless be very impatient with the enumeration of difficulties and will say that these difficulties have all of them been recognized in times past and all good schools have taken steps to meet these difficulties. One who objects to the foregoing discussion on such grounds as these is in danger of missing the whole point of the discussion. It is not the aim of this paper to advocate the abandonment of standardization because of the shortcomings of our present system. It is the purpose of the foregoing statements to call attention to the fact that what is needed is a treatment of the unit in a vigorous spirit which shall encourage those schools that are well organized and are taking cognizance of all of the defects in the present definition to go on with the kind of work which they are doing. The good high school which knows what it is about ought to be in a position to recognize all of the variables and to include them in its treatment of a given unit. For example, coming back to the matter of an advanced course in algebra, here is a course which is to be administered to a small group of homogeneous

students. They have all of them pursued mathematics up to a certain point. They are all of them known to be earnest students, desiring to prepare themselves for advanced work. They are to be trained by a teacher who is thoroughly competent. How many hours a week ought they to be required to attend class? Any sane administrator of the high school knows that the answer to this question is wholly different from the answer to a similar question which might be raised in the following terms: Here is a class of students who, for one reason or another, are going to begin Latin. Some of them are trying to fulfil the traditions of a scholarly family. Some of them have been driven into this course by the urgency of the school principal. Some of them have a remote expectation of entering a college which requires Latin. Some of them go into this course because their friends are going into the course. The work is to be done by a young teacher who has just been employed by a board of education which pays no attention to the recommendation of its superintendent and principal and has hired a local candidate who belongs to an influential family in the city and wants to be employed for a few years before she gets married. The problem now is, How much time ought to be given to these classes in algebra and Latin in order to produce a unit of credit in each? Presumably the class in Latin ought to meet fifteen or twenty times a week if it were not for the fact that each meeting is likely to do more harm to the intellectual life of the student than good. The pathetic fact is that under the influence of our present quantitative system it will take a Herculean effort to differentiate between these two situations.

Perhaps the advocate of the examination system of admitting students to college will see here his opportunity to suggest a cure for the difficulty. This prescriber of examinations should note first that the inequalities within the high school are reflected in the college requirements. Read a Greek paper, if you can find one today, and compare it with a paper in the same department when Greek was a common subject. Who knows how to set an examination in English that represents the same degree of training as an examination in geometry? Let our examiner note one further fact: The amount of credit given a student is not determined by

the examination, but by the record of the number of periods of high-school work which he took as a preliminary requirement before he could be admitted to the examination. The examination system is in the grip of quantitative formalism no less than the general administration of high-school courses.

Nor will qualitative definitions help the matter. The formal quantitative evaluation of units must be corrected by a more equitable quantitative definition. If one does not accept the statement that qualitative definitions will not meet the case, let him read the history of those efforts which have been made in the past to enumerate the topics which are to be taught in a unit course. From time to time various associations and various colleges have attempted to set down in great detail the topics which should be covered by a high-school course. We pass over the humor of the effort of a college faculty to tell a high-school teacher what topic he ought to cover. The one who determines what secondary-school students need ought to be someone who knows secondary-school students and who has had some practical contact with the problem of training their immature minds. Furthermore, what such students need cannot be defined in anything more than a suggestive way in any table of contents that ever was written.

It is perfectly clear to anyone who has seen high schools in different sections of the country that it is quite impossible to give any universally acceptable enumeration of topics. It is not that intellectual life in one part of the country is entirely different from intellectual life in another, but it is true that the selection of topics depends very largely upon the teacher, and certain aspects of the subject depend upon the illustrative material that is readily at hand. He who would define a high-school course by enumerating the topics which are to be taken up in that course fails to recognize these personal and local differences. One has only to consider the efforts of some of the committees which are now struggling with the problem to realize that it is no longer possible to organize a single committee with geographical range broad enough to cope with its problem. One hears from time to time the statement that the work of the Committee of Ten needs revision, but the work of the Committee of Ten will never be done if the attempt is made

once more to define courses for the whole United States. There must be a definition of high schools and high-school units which will allow enough latitude in the subjects covered in each of the different departments to give different teachers and the different localities their legitimate share in the solution of the problem.

Furthermore, the qualitative definition will have to recognize differences between individual students. There is no reason at all why students should not have more or less credit for work done in the same class. Every teacher knows that this difference exists. If by any leveling process we give currency to the assumption that all students in a given course are alike, and above all if we talk as though it were the best members of the class who are getting the real credit for a given course, we shall be deceiving ourselves, as we have for some years deceived ourselves, with the merely quantitative definition of a credit. Some students get twice as much out of a course as others, if not three or four times as much. Some students get out of courses habits of diligence and study, habits of concentration of attention, and habits of systematic thinking which other students fail to get. At the present time the teacher has no opportunity or encouragement to trace these distinctions. He must either pass the student or not pass the student. When the student has safely passed in the course, there is only one question raised with regard to him: Shall we certificate him to college or not? If the high school should attempt to say to the college that here is a student who is three times as good as another student coming from the same class, the college would doubtless respond that the terminology of the high school is so obscure that it would have to be referred to a special committee of the faculty. It is doubtful whether the special committee of the faculty would have linguistic knowledge enough to unravel the meaning of this phrase. It is so much simpler to use the term "unit" and say that students have a unit of credit. That word requires no special meetings of college faculties. We all use it to cover up a multitude of inequalities and are so complacent about the matter that it is disturbing to have anyone suggest any other possibility of any kind whatsoever.

What can it mean that one student gets twice as much out of a course as some other student? To be sure, society will recognize this distinction a little later, in the fact that one boy who has a college course will get a position five times as good as the position which is given to his classmate, and society will say of the schools that they do not know enough to distinguish between good students and bad students. Society does not say that all college graduates should have the same salary and all high-school graduates should have the same standing in the business world. Our use of the unit will ultimately have to be refined to include some of the gradations commonly recognized in society's more intelligent discriminations. Would it not be well to take a suggestion from society in this respect and try out a scheme of re-equating credits? Would it not be well to leave high schools a very large freedom in the organization of their units? Or, to put the matter definitely, would it not be well to say to any high school: "Organize your courses as in your judgment is best suited to the needs of your students and your staff of instructors. If your advanced algebra can do with three hours a week the work of your elementary Latin in six hours a week, that is for you to judge. If, after the student has completed the course, you find that he is well advanced in intellectual maturity and powers of reasoning, you may report that fact to the college in terms that seem to you to be appropriate. You may say to the college, 'This student has one and a quarter or one and a half units, or you may say that he has two units.' The college, in turn, having accepted this student, will observe his work with care and will report back to you whether or not your judgment is good. If your judgment is bad, then the college will have to reserve the right to ask for improvement in your organization before it accepts further students from you on the basis which you define."

This suggestion will sound to some to savor of anarchy. It will be said by some, "How can colleges come in contact with high schools on any such basis as this?" There are two answers to be made to this question: The first is that at the present moment many colleges do not come into contact with the high schools on any basis, and it will be a good thing to adopt a scheme which

will drive colleges to a study of the secondary-school problem in detail.

The second answer is that the high school needs a jolt to save it from quantitative formalism. The unit is today a cover for defects. Anything that can bring about a reconsideration of the unit will make for progress. High schools and colleges will come together as a result of intelligent discussion of this standard which now holds them apart because it is a formal and an unsound standard.

A reconsideration of the unit is needed also for the sake of the student. With our present system, counting credits is more absorbing to the average student than mastering intellectual problems. If we began re-evaluating units in terms of the work actually done, students would gain an entirely different notion of the value of a high-school course. There is many a boy today who knows he can pass the course in the high school, and for that matter in college, without any effort, and he proceeds to take advantage of this knowledge by not doing any more work than the minimum that is required. One hears of the student who graduated with a slightly higher rank than was necessary and bemoaned the fact that he put in too much effort to get his degree. The high-school student who gets a mark so far above the passing mark that he is perfectly safe for graduation and for college recommendation is looked upon by his fellow-students as having exerted himself unjustifiably. If now one could turn about sharply and say to these students, "The better your mark, the more respect you will receive from the community; the better your mark, the higher the recommendation that the high school can give you, and the fuller the recognition that the college will accord you," the student would get a notion of intellectual work of a type altogether different from that which he now has. He would begin to realize that formal standards are not the real standards in the world at large. Of course, we should have some inco-ordinations for the time being. There would be high schools which would take advantage of their freedom, but the number of such high schools is no greater than the number of colleges that now exhibit all sorts of irregularities in college admission. The smug, self-righteous accusation of the

colleges that the high schools would take advantage of their regulations is utterly laughable to one who knows both institutions. The high schools are just as eager to organize themselves well as are the colleges, and the high schools are in general quite as competent as the colleges. If the comparison is made between the better high schools and better colleges, and the poorer high schools and the poorer colleges, it is doubtful which institution would come off better. The trouble is that the good colleges talk about the high schools in terms appropriate only to the lower-grade schools and forget that under the name of college masquerades many an institution which has no more right to be treated with respect than the high schools which are under accusation. The better high schools of this country know what they are about, and they can be intrusted with the duty of telling the colleges exactly what the qualifications of their graduates are. The poorer high schools cannot be intrusted with these functions and ought to be found out by being given a trial. As it stands now, there is always a college ready to receive the graduates of every high school.

The conclusion, therefore, is this: Let the high schools define the value of their units. Let both high schools and colleges study the problem of the value of work done. Let students and teachers alike give up the purely formal estimation of credits and recognize values in something like their true relations.

THE CO-ORDINATION OF INDUSTRIAL STUDIES WITH TRADITIONAL SUBJECTS IN THE HIGH-SCHOOL CURRICULUM

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A communication to the *Nation* from Leland Stanford Junior University (November 27, 1913, XCVII, 506) deplors the fact that industrial education is rapidly crowding out of the high-school curriculum those studies usually classed as cultural or traditional. The writer asserts that teachers meet in institutes to talk about social obligation and industrial efficiency and to sneer at intellectual attainment. In all of these statements, he merely expresses an unconfirmed fear. He presents no data to justify his prediction that children will become "noisy, happy, and empty" if they are permitted to select industrial subjects. This article voices the objections most frequently urged against industrial education, viz., that these newer school activities crowd out cultural subjects and fail to stimulate intellectual effort and to measure intellectual achievement.

The addition of industrial education to the curriculum of the Boise, Idaho, High School has produced some results that may comfort this writer to the *Nation* and those who share his fears. During the past five years, thirty-one years of industrial subjects have been added to the curriculum, consisting of ten years of commercial studies, six of agriculture, six of home economics, two of industrial art, three years of shopwork in wood and concrete, and four in mechanical, machine, and architectural drafting. Nine years of cultural subjects have also been added to the curriculum, which now offers thirty-one years of industrial work and thirty-one years of traditional studies. Sixteen years or units of work are required for graduation. If students are to distribute their choice over a curriculum offering sixty-two units, unusual freedom of election must be permitted. Three years of English are required

of all; each student may select to suit his own vocational needs the additional thirteen units necessary for graduation.

The most noticeable effect of this policy has been a marked increase in attendance. In 1908, there were 400 students in the high school. Last year, 997 were enrolled, and this year more than 1,000 will be in attendance. Five years ago, the largest class in the history of the school up to that time was graduated. There were 44 in that class. A year ago, 144 were graduated, and this year more than 160 will be awarded diplomas. In other words, the high-school enrolment has increased 150 per cent in five years, and the number graduating has more than trebled. Whence came this unusual increase? The growth of the city did not occasion it, since the elementary-school enrolment has increased only 11 per cent during the same period. The number of non-resident pupils has not materially increased, as there were collected in tuition at \$40 per capita but \$2,269 in 1914 as against \$2,164 in 1909. Hence these two presumable sources of increase must be eliminated.

The inference remaining is that, as the curriculum broadened and included more and more of industrial work, many children who would not have entered a high school offering exclusively traditional courses were attracted by the industrial studies available. The table presented exhibits the percentage of total school enrolments in the second and the seventh grades of the elementary school, and in the first and fourth years of the high school for the school years ending in June, 1911, and in June, 1914.

TABLE I
GRADE PERCENTAGE OF TOTAL ENROLMENT

Year	Second Grade	Seventh Grade	First Year High School	Fourth Year High School
1910-11	11.82 per cent	7.88 per cent	5.37 per cent	2.46 per cent
1913-14	9.15 "	9.32 "	8.11 "	5 "

The increased percentages of total enrolment in the seventh grade, the first, and the fourth years of the high school for 1914 show the rapidly increasing power of the school to retain the children for the full twelve years. In 1911, the high-school attendance

was 15 per cent of the total enrolment. In 1914, 24 per cent of the total school enrolment were in the high school. The past three years have been characterized by business depression in the Northwest, consequently the school enrolment has not increased by any immigration. The increased high-school enrolment has been occasioned by the fact that a constantly growing percentage of the pupils from the grades are attending the high school, attracted by the variety of the work offered them.

Moreover, the introduction of industrial subjects has not prevented the traditional subjects from enjoying a very wholesome growth. Allowing four subjects for each of the 400 students in attendance in 1909, there were 1,600 registrations in strictly traditional subjects that year. No exact data are available, but the estimate is fair. There were as many students who registered for fewer than four subjects as there were who carried more than four studies. In 1914, there were 997 students enrolled with a total of 4,119 registrations. Of this total, there were, in traditional subjects, 2,864 registrations, an increase of 1,264. Many students have been retained for the high school because they want the industrial work. After they have enrolled and registered for the industrial work that appealed to them, they complete their program by taking one or more cultural subjects. Industrial education has, therefore, not crowded cultural studies out of the Boise High School but has extended these traditional subjects to groups of students who would never have entered the high school had the curriculum offered cultural courses exclusively.

On this subject, the testimony of Professor Arthur Bratton, dean of liberal arts, Whitman College, at Walla Walla, Washington, is interesting. After visiting the school for one week, his comments in a local paper are in part as follows:

You ask me for my impressions of the Boise High School. Perhaps you will best understand what I have to say if I first tell you of the mental attitude with which I came to make my visit.

I had read and heard much of the departures from traditional educational lines, which were receiving so unrestricted a trial here. Many high schools in this section are being modified along much the same lines as are being followed here, but the vigor and whole-heartedness with which the program is being followed by your officers . . .

My own education and experience had led me to regard as of the highest value those courses which are generally classed as cultural, and I was prepared to criticize any change which should seem to lessen the importance of these subjects in the high-school curriculum.

LARGE NUMBER OF STUDENTS

One of the early facts which I learned here was that you have registered nearly a thousand students, a far larger number than is normal for a city of this population. Then, that your senior classes of last year and this are considerably in excess of a hundred, again a larger proportion of students completing the course than is usual. I found also that the number of registrations in the cultural courses has nearly doubled in four years, whereas the population of the city or school district shows no such increase.

I asked several of the teachers in the cultural subjects, particularly languages, as these might be expected to suffer most, about the effect of the free election and the vocational courses on the attendance and quality of work in their classes, and found that they indorsed the opinion that on the whole the work in their departments had been helped rather than hindered. I am disposed to attach high value to these opinions. . . .

I am convinced that not only are many pupils induced to continue in the school who would otherwise have dropped out, but also that in many cases the vocational work becomes the basis of an interest in the cultural courses which increases their usefulness and the demand for them.

The writer to the *Nation* assumes that industrial courses do not stimulate intellectual effort and do not measure intellectual attainment. Many school officials assign these reasons for permitting only a limited minority of the units necessary for graduation to be worked out in industrial lines. No one, however, has ever proven conclusively that traditional branches produce greater intellectual changes in those pursuing them than industrial activities efficiently conducted. But assuming that for those in the high school who may reasonably hope to go to college courses in strictly traditional lines may be advisable and desirable, school managers should remember that students preparing for college are but a small percentage of all who might be in attendance if courses were provided for the vocational needs of the vast majority who may not hope for educational opportunities beyond those afforded by the public schools. The high school is the people's college and the officials who direct its activities should be just as careful to provide the kind of training necessary to prepare the many for industrial

life as they have always been to secure adequate college-preparatory courses for the fortunate few.

The board of education in Boise awards the diploma of graduation to all students who have labored four years in the high school preparing themselves for their own chosen vocation in life. The work of the boy who has prepared himself to enter college is not discredited because the same award of merit is conferred upon the boy who has creditably completed those courses which best prepare him successfully to manage a farm.

Those who elect the vocational courses not only get some vocational equipment but they also receive the best training to stimulate their intellectual effort and to increase their intellectual attainment. Last spring the 250 students who in the previous September entered the high school from the elementary school in Boise were classified into the highest third, the medium third, and the lowest third, the basis of classification being the grades awarded at the end of the first semester in the high school. These groups were then compared with a similar classification of the same students, the grades at the end of the elementary school being the basis of classification. Table II shows the comparison. Those who made the study were asked to

TABLE II	
Elementary	High
First	{ First 47 per cent
	{ Second 36 "
	{ Third 17 "
Second	{ First 40 "
	{ Second 41 "
	{ Third 19 "
Third	{ First 13 "
	{ Second 23 "
	{ Third 64 "

determine why there was such a variation of achievement in the grades and in the high school. Why did only 47 per cent of those in the first group in the grades maintain their position in the first group in the high school while 53 per cent fell below that group? Why did only 41 per cent of the second group in the grades maintain their position in that group in the high school and 59 per cent

go above or below it? Why did 36 per cent of the third group in the grades go up into the first and second groups in the high school? To determine the cause of this marked variation in the elementary school and the high school, the individual programs and grades of all the 250 students were examined. Upon entering the high school 82 students selected half or more than half their work from the industrial courses. More than one hundred elected one or more industrial courses. Of the 82 who went intensively into the industrial work, 70 advanced above the group to which they had belonged in the grades, while only 12 merely maintained their position in the same group or fell below it.

To explain this situation, one might suspect that teachers of industrial subjects grade more liberally than those who teach the traditional studies. There was found, however, no foundation for this assumption. No correlation could be established between teachers who grade high and those who grade low, and those who teach cultural subjects and those who conduct industrial activities. The variation of standards in grading was quite as much among the different teachers of English as between the teachers of English and those who teach cooking or sewing. The teachers of mathematics and modern languages varied quite as much in standards in grading as those of agriculture and bookkeeping. The curve of distribution of grades from highest to lowest was about the same for the newer school activities as that for the traditional subjects. Greater liberality in grading by the industrial teachers, therefore, could not be accepted as an explanation of the fact that students of industrial subjects tended to go above the group to which they had belonged in the grades and so to disturb the former alignment as to bring down the ones who selected the strictly traditional subjects.

Seventy of the 82 students who, upon entering the high school, selected mainly industrial work went above the group to which they had belonged in the grades because they were permitted to select courses which appealed to them and for which they soon demonstrated that they possessed some aptitude. Their former grade teachers were surprised at their high-school achievements. These students accomplished little in the grades because there

was nothing in the formal elementary-school curriculum to stimulate, to develop, and to measure the special types of ability they possessed. The compulsory attendance law kept them in school, and so they merely marked time and in a spiritless and listless fashion did as little of the rigid work required as would be permitted. But they possessed ability undiscovered either by themselves or by their teachers. Had the high school not afforded opportunity for the exercise and the development of these special types of ability, the students who possessed them would soon have left it for the more congenial and educative atmosphere of the world outside the school.

Fifty-two per cent of all who elected one or more industrial courses went above their grade group even in the traditional studies with which they completed their programs. This means that they had always possessed abilities which in the grades had been undiscovered even by themselves. The industrial work in the high school afforded them chances to demonstrate their worth and to develop their special aptitudes. Their increased self-respect and self-confidence awakened new hope and new ambition. They therefore attacked even the traditional studies with enough energy and enthusiasm to get better results than they had ever before attained. But the industrial studies had first stimulated their intellectual effort and thereby increased their intellectual attainment when it was measured by their achievements even in the cultural subjects.

The introduction of industrial education into the curriculum of the Boise High School has not, as the writer to the *Nation* and some local critics predicted, crowded out cultural education, but has wonderfully increased registrations in strictly cultural subjects.

Industrial education has not, as some conservatives prophesied, decreased intellectual effort and intellectual attainment. The pupils who elect the industrial courses develop unexpected ability to attack and to master even the cultural subjects.

HIGH-SCHOOL STUDENTS' DESCRIPTIONS OF THEIR METHODS OF STUDY

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Before we can modify the study-habits of high-school students it is first necessary to get from them some statement of their habits as they actually are. As a means of arriving at such a statement the questionnaire has been frequently used. The disadvantage of this method of investigation is that such questions must be, of necessity, leading questions. By careful questioning, a pupil can be led to discover that he has a whole category of study-habits which he uses or might use on some occasion or other. Conclusions based on such methods may give an entirely erroneous impression of the methods of study which are actually used from day to day.

Another method of investigation attempts to have the pupil describe the method by which he prepares a given assignment, and thus to have him reproduce, spontaneously and without taking his cue from anyone else, his methods of study in a specific instance. The obvious objection to this second method is that high-school pupils are not keen in their analyses of their own habits and mental processes. However, such descriptions do afford an insight into the more regularly established habits. By this method the process which is repeated from day to day is almost sure to be commented on by the pupil. More exceptional methods will probably not be mentioned. If a given pupil has habits of study sufficiently characteristic to differentiate him from others they will very likely appear.

Following this second method of investigation, all the pupils of the high school, which includes also, in part, pupils of the seventh and eighth grades, were given the following exercise for the same period in the day: "With your assignment for the next period before you, (1) Describe point by point the different things you will do in preparing it; (2) Give the general topic with which your assignment deals; (3) Grade; (4) Any special device which you

use. Prepare your lesson and see if you did less or more than you indicated and correct accordingly."

Although the programs of some of the pupils did not permit them to participate in the exercise, 166 manuscripts were received, an approximately equal number being from each grade.

At this particular period in the day the seventh grades were preparing a history assignment, the general topic of which was, "Growth toward Union in the Colonies"; the eighth grades were preparing a history assignment, the general topic being, "A Comparison of the Advantages of the North and the South in the Civil War"; the ninth grades were preparing an assignment in botany, the general topic being, "Some Conditions Influencing the Growth and Germination of Seeds"; the eleventh grades were preparing an assignment in mediaeval history, the general topic being, "Early Raids and Settlements of the Northmen"; the tenth grades were preparing an assignment in Roman history, the general topic of which was, "Social Classes in Republican Rome"; the twelfth grades were preparing an assignment in Chaucer's *Canterbury Tales*, the general topic being, "Prologue—Description of Pilgrims."

These manuscripts were then analyzed grade by grade and the results tabulated. These are given in the accompanying table. The numbers have been converted into percentages for convenience in comparison. A pupil was not given credit for using a particular method unless he mentioned it definitely. Thus many who said, "I study it first," were not given credit for having read the assignment once, although such a statement might be so interpreted. A sample reading of the table would be: "Of the seventh grade 91 per cent read the assignment once, 74 per cent use dictionaries, 71 per cent use maps, 5 per cent re-read," etc.

A few of the facts of this table are worth noticing. First, the percentage of those who know the general topic with which the lesson deals decreases from grade to grade as we go from the seventh to the twelfth. This may be due to a difficulty inherent in the method of treating the subject-matter of the text, the more complex interrelations of the advanced subject-matter having obscured its relation to the general topic, or, more probably, the high-school teachers have exercised less care in making their assignments and have failed to indicate the bearing of the specific subject-matter

upon the general topic with which it deals. At any rate, there is room for high-school teachers to improve in definiteness of assignment. Many assignments are poorly prepared because the pupil has no perspective adequate for its interpretation.

METHODS AND PERCENTAGE USING EACH BY GRADES

	Subject, History	Subject, History	Subject, Botany	Subject, Roman History	Subject, Mediaeval History	Subject, English
Year—B and A sections combined.....	7th	8th	9th	10th	11th	12th
Percentage knowing the general topic...	88	82	72	71	70	23
Percentage of each grade using the following methods:						
1. Read once.....	91	86	81	71	90	77
2. Use dictionary.....	74	24	9	38	20	19
3. Use maps.....	71	14	.....	42	15	.....
4. Re-read once or more.....	5	45	9	37	40	46
5. Ask themselves questions and attempt to answer.....	37	.....	25	42	25	.....
6. Repeat off book.....	37	17	.....	8	.....	.....
7. Use additional reference.....	20	55	22	12	55	.....
8. Outline.....	3	.....	3	.....	.....	11
9. Tell story in own words.....	9	10	.....	12	.....	14
10. Use comparison and contrast.....	23	3	.....	.....	5	.....
11. Exercise judgment in the choice of sub-topics.....	11	41	.....	16	45	11
12. Merely recognize that there are points or sub-topics.....	20	34	6	21	35	.....
13. Write out notes.....	.....	3	25	8	20	7
14. Use glossary.....	.....	.....	.....	.....	.....	61
15. Translate.....	.....	.....	.....	.....	.....	11
16. Memorize dates.....	14	.....	.....	.....	.....	.....
17. Find the paragraph which gives answers to questions.....	.....	24	.....	.....	.....	.....
18. Underscore words.....	.....	.....	.....	12	15	7
19. Look up references in footnotes.....	.....	.....	.....	.....	.....	23
20. Group events about dates.....	3	3	.....	.....	.....	.....

Another point worth noting is that in the two beginning history classes, namely, the seventh grade which is studying American history for the first time and the tenth grade which is beginning high-school history for the first time, classes in which the teachers had spent much drill in the use of maps, dictionaries, questions to themselves, and such aids, the percentage which was using such methods was relatively high. Again, in the seventh grade, where the teacher had been emphasizing comparison and contrast as a

method of study, the percentage using that device was very considerable, while it was scarcely mentioned by other classes. This would seem to point to the conclusion that teachers can modify the study-habits of children by conscious attention to methods and devices. This phase of the question will be made a matter of subsequent investigation, to which the present investigation is preliminary. It is to be further noted that the percentage of pupils in the eleventh grade using the devices mentioned above is very much lower than that of the tenth grade, although when the former class began its high-school history it was drilled quite as thoroughly in the use of such methods as the present tenth-year class is being drilled. This would seem to indicate that these habits, although used at one time, do not continue, unless made the subject of persistent and conscious effort on the part of the teacher. The intermittent attention to any given method on the part of teacher and pupils, with the exhortation on the part of the teacher to use such methods constantly in study, is not sufficient. The teacher must see to it that such methods are used constantly until they become as regularly established as preparation itself.

This conclusion is yet further emphasized by the relatively high percentage of those who exercised judgments in the choice of sub-topics in the eighth and eleventh grades, where that particular method of study had been made a matter of some deliberate endeavor on the part of the teachers.

The descriptions vary widely. Some pupils describe their methods very definitely, while others give very meager and general descriptions. The following is one of the best descriptions of methods of study in history. It is given by a pupil, age twelve, in Grade 7A. It has certain unusual features, also.

1. "Read lesson over."
2. "Read about it in other books."
3. "Look up words I do not understand."
4. "Then I make outline of paragraphs and look up each topic."

SPECIAL DEVICES

1. "I put myself in the place of one of the characters in the lesson."
2. "I shut my eyes and think of it as a picture, one scene at a time."
3. "Sometimes in battles, I read the battle over, then draw a plan of the battle."

4. "I locate in the geography places mentioned."

The following is a meager description by a pupil, age thirteen, Grade 8A:

1. "I would read the lesson over first."
2. "I would read it over again to see if I had it right in my mind."

The following is a description by an excellent Grade 10A student of her method in preparing a Roman history lesson:

1. "I read each separate paragraph and get the main points."
2. "I discuss to myself freely the main points and their relation to other parts."
3. "I read it all over again to be sure I have not missed a single point."
4. "If I come to a word I don't understand, I look it up."
5. "Locate in the atlas every city and country mentioned."

A boy in Grade 12A reports thus:

"I just hop to it until I get my lesson."

He is a very poor student, having been in high school four years, and is yet a year from graduation.

A girl in Grade 12A who is an excellent student, having done four years' work in three and a half years, reports thus with regard to a domestic science assignment:

"First I read each topic carefully. I then choose the most important points and write them in the form of an outline. I treat each topic in the same manner, and when I have finished reading the lesson I have a very good outline to which I may refer whenever I need it. I generally place the outline in my domestic science notebook and look over my notes just before the recitation."

Some special devices, each of which was mentioned by only one person and consequently not included in the table, are reported. Examples are:

- "I try to connect the names of men with places on the map."
- "I write down all dates and events which happened at that time beside them."
- "I use a rhyme for remembering dates, which I make up myself."
- "I use sums of money for important dates. I think of myself as having that many dollars."

In the Middle English of Chaucer the usual devices of translation are resorted to, writing their meaning above the words of the text, rearranging words to bring out the meaning better, in addition to the more common practices of using the glossary and foot-notes, and striving for fluency by repeated readings.

NOTES ON HISTORY-TEACHING

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In the process of making history a well-taught subject, a mass of direction and suggestion has been collected which is well-nigh appalling to the new teacher. Traveling the main roads with his nose buried in his Baedeker, he is in danger of missing those casual experiences which truly interpret a country. The history teacher should set up somewhere in his room an automatic reminder of the fact that a teacher with a personality is better than a library, that a sense of humor is better than a roomful of illustrative material, and that a well-placed laugh is better than a lecture. When history teachers should be enthusiastic, many are not even interested. As a result, the elaborate house of method is built on the sand. High-school students are sophisticated. They are thoroughly acquainted with the genus teacher. When they confront a new one, they expect him to go through the same old maneuvers and attack with the customary weapons. The battle is half won when they discover that he has resources of his own and that he is armed with the unexpected.

Depressing discussions of entrance examinations, the bringing to light of more or less valuable archival discoveries, the tiresome case of *High School v. College*, with the jury always divided and the judge always sleeping, syllabi, bibliographies—these things are all necessary; at least, they appear to be unavoidable. But in actual contacts with disconcerting young animals they seem very futile. For the sake of the mental “kick,” it is desirable sometimes to write and read things that are not of the historical bureaucracy—things that are just “folks.” The mind of the teacher often needs jostling more than filling.

Take the teacher who started her course in ancient history with a lecture on the neolithic and paleolithic periods. This teacher was right in so far as a reference to prehistoric ages is desirable. Moreover, there is more than one point of departure.

In my opinion, however, she selected the wrong one. For myself, "periods" are generalizations, and, at the beginning of a course, are taboo. Something common and tangible, a dog, for instance, serves my purpose better. For children know dogs. A clipping which I have in my files, a summary of a *Revue scientifique* article, says that "the first animal that we know positively to have been domesticated is the dog." The proof is found in the "kitchen-middens," the garbage piles of the prehistoric housekeepers. My clipping adds that "all the bones found in these middens are gnawed and more or less eaten" and that "dogs' bones are also very numerous among them." Here, then, is a familiar link between the remotest past and the everyday present; and the transition is easy to the domestication of animals in general, the use of fire, and other prehistoric "contributions to civilization." So, in introducing Roman history, I have read to the class a little poem, clipped from the *Century*, addressed "To a Roman Doll," found in a child's grave in Hawara, Egypt.

. . . . She held you all the ages on her breast.
What wondrous love was hers, outlasting thrones!
Her lullabies, outsoundings battle tones,
Outlingering *Iliads*, brought unbroken rest.

If the city is engaged in paving or the county in road-building, read a description of the Roman roads. Some have appeared recently in the automobile sections of magazines. It is clear to me that dogs, dolls, and roads are better starting-points than "periods."

The stuff of history is concrete. The history-writers, not the history-makers, are the ones who have generalized it. The makers of history are doers, not philosophers. The power of generalization is valuable, of course; but it is acquired only after dealing with many concrete things. With young students, history must be concrete in order to be understandable. It must be translated, as far as possible, into the familiar terms of modern life. If the topic is Ionic columns, point to the ones on the new post-office building. If you are teaching the English Bill of Rights, show its survival in the state constitution. If war has the stage, take the class behind the scenes where wooden legs, lock-jaw serums, and groans are conspicuous among the properties. The Chinaman's

ten-cent wage, blue cotton garments, brass and bamboo currency, and rice menu explain the Exclusion Act.

History, as a record of life, is an inexhaustible mine of humor. Even the gods held their sides when Vulcan limped. Plutarch is amusing. So is Rev. Weems. Franklin cracked jokes. Lincoln's humor has entered into the texture of American history. Diogenes was funny. So were Peter the Great, John Smith, and Andrew Jackson. Two-thirds of the "screamers" published from time to time originate in the history class. The teacher should no more frown at these blunders than the Puritan should have scowled at the May-pole. When a student calls the Kaiser a "geyser," read his mistake to the class. Laughter clears the atmosphere and makes future blunders less frequent.

Without persons there is no history. Recent events both in Europe and in America show that the "captains and the kings" still direct, to a surprising extent, the destinies of nations. History makes us the intimates of these history-making men. Do you remember Twain's remarkable double who looked more like Mark than Mark did himself? It is somewhat similar with the men of the past. No one at any time ever knows them adequately. But we know Napoleon now better than he knew himself. Let us make the most of it.

I sympathize [says Chesterton] with the whitewashing of King John, merely because it is a protest against our waxwork style of history. Everybody is in a particular attitude, with particular moral attributes; Rufus is always hunting and Cœur-de-Lion always crusading; Henry VIII always marrying, and Charles I always having his head cut off; Alfred rapidly and in rotation making his people's clocks and spoiling their cakes; and King John pulling out Jews' teeth with the celerity and industry of an American dentist. Anything is good that shakes all this stiff simplification, and makes us remember that these men were once alive; that is, mixed, free, flippant, and inconsistent. It gives the mind a healthy kick to know that Alfred had fits, that Charles I prevented enclosures, that Rufus was really interested in architecture, that Henry VIII was really interested in theology.

In dealing with Washington,

Down with the wig
And the mask of the prig!
Do what they can to smooth and conceal it,
They're forced to reveal it—
He was a *man*!

Read to the class Washington's account of the assaults of the Jersey mosquitoes and his contract with his gardener stipulating that the latter should get drunk at Christmas, Easter, and Whitsuntide. Many pictures are available of Luther, Napoleon, Washington, and Lincoln. These show interesting variations and are a fascinating study in themselves.

Nothing visualizes history like pictures. As to their use, practice varies. Some should be thrown on the screen, some passed around in class, some arranged in a historical laboratory for careful study. Many lines of progress can be effectively summarized in a projectoscope lecture. Take, for example, transportation. Of course, commerce, trade-routes, and sea-power have not been painted or photographed. They are abstract. We shall have to sketch them figuratively. As the old grammars used to say, we shall have to let the sign stand for the thing signified. After all, what is more significant of the rise of German commerce than the "Imperator" or the "Vaterland"? Pictures, such as I cite below, are easily secured: pictures of the Phoenician, Greek, and Roman galleys; a Venetian fisherman's boat; the "Santa Maria"; Armada boats; the "Half-Moon"; the "Mayflower"; seventeenth-century ships-of-the-line; Fitch's vertical-paddle steamboat; the "Clermont"; a river flat-boat; a canal barge; the "Savannah"; California clipper ships; a cross-section of the "Olympic"; the harbor of Hamburg; the "Vaterland." In turning to land commerce, we shall sketch first the history of roads, noting the Persian imperial road, the Roman roads, Napoleon's roads, the fearful English roads of the eighteenth century, Telford's and Macadam's systems, and the railroad. The world has used on these roads a variety of vehicles: the elephant, camel, dog, and horse; the sedan chair of the Orient, the sleigh of Russia, the classic chariot, the mediaeval two-wheeled wagon, the stage-coach, the prairie-schooner, the railroad car, the bicycle, and the automobile. The last three have each a characteristic and interesting development which can be shown pictorially. The evolution of the locomotive is illustrated similarly by pictures of Trevithick's early models, Hedley's "Puffing Billy" of 1804; Stephenson's "Rocket"; the "John Bull"; other locomotives of the grasshopper type; the mid-century funnel

stack; and the modern ten-drive-wheel giant. The development of aeronautics, weapons, communication, bookmaking, and agriculture can be illustrated in the same way. These pictured summaries should be used late in the course, during the semester review, perhaps. They show visibly the great fact of progress, and they inspire a state of mind that is optimistic, positive, and forward-looking.

As someone has pointed out, a cartoon is really a better likeness than a photograph. For the cartoon accentuates that which is individual, that which really distinguishes a man from his fellows. Moreover, a cartoon is, so to speak, a double exposure. It is a picture, not only of an individual, but of a public. Cartoons of Lincoln are not only biographical; they are historical. Nast and Tenniel were interpreters and positive forces.

Maps, it is needless to say, are indispensable. Apparently, a new science is slowly developing, the science of historical cartography; a science sorely needed to bring order out of confusion. Maps range from the blank outline wall-map, which is highly useful, to the expensive creation which is so cluttered with color, lines, and dots that it is useless. Maps taken from foreign railroad guides, and those "aeroplane" maps which appear in papers and magazines, and which show cities, roads, and physical features, are often decidedly worth filing. When my class was in the gloomy days of Phillip II, I exhibited a map of the Zuyder Zee, showing the latest reclamation project, and this, with the Dutch boast that "God made the world but the Dutch made Holland," was an effective introduction to the story of the sturdy little Netherlands. A map of the deer-parks in Scotland connected with the land reforms of Lloyd-George. Another suggestive map showed New England settlements east of the Mississippi; another, the migrations of Lincoln's ancestors. Plans of a few cities should also be at hand; for instance, Paris, London, Boston, Washington. Even ground-plans of buildings are often necessary, as of the Capitol and the White House.

Teachers should imitate the railroad guides and "Travel," and use maps and pictures in combination. For example, in presenting the Reform Bill of 1832 I used the following maps: a

map showing distribution of population in 1750; another showing distribution of population in 1830; another, a dotted borough map—which we called our “smallpox” map of England—showing the distribution of parliamentary members in 1830; and with these maps two pictures—one, a mediaeval sketch of Old Sarum, with its cathedral, streets, and walls, like the hub, spokes, and rim of a wheel; and the second, a photograph of the sheep-pastured, grassy moat of the nineteenth century. The pictures were cut from a booklet published by the Great Western Railroad of England. The maps were transferred from books to McKinley wall-maps. Maps and charts, to be clear and attractive, should be in color.

Teachers can often obtain useful charts from government publications. The last Bureau of Immigration report contains charts in color, representing in a striking manner the history of immigration since 1800. A chart, like an advertisement, should not attempt to say too much. If you are showing railroad construction since 1830, you may put in heavy lines to emphasize the panic years, but do not attempt also to show the rise and fall of imports and exports, public land sales, and gold production.

In the teaching of contemporary history, the opinions of newspapers and statesmen in other countries should be taken into account. A Japanese jingo's comments on California, a Mexican newspaper's criticism of Wilson, a South American view of the Monroe Doctrine, a French editorial on Alsace-Lorraine, an English observation on the German emperor, the various countries' apologies for the war—these things show that the world is moved, not by the truth, but by individual and mass conceptions which often are very far from the truth. It may be that “Truth crushed to earth shall rise again”; but it usually rises about a century later in some university professor's study. It is important to understand the point of view of peoples—their bias, prejudice, and ignorance. More than one despot has deliberately poisoned the public mind. “Louis XVI was a peaceable and gentle monarch who in the course of his long reign showed himself particularly skilful in finding expert ministers of finance. Loved and honored by his people, the aged monarch died suddenly after a glorious reign, as the result of a fit of apoplexy.” The above, you say, is

not history. Nevertheless, it is history as taught in Russia. It is as necessary, it seems to me, to develop in students a critical attitude toward the newspapers and books of today as toward the letters and memoirs of the past. The city editor is to be depended upon no more than Bismarck.

The history teacher, in hastening toward his goal, sometimes forgets that much of history is literature; that, in any event, history and literature supplement and clarify each other. The historian interprets the past and often incidentally contributes to literature; the literary man interprets the present and often incidentally contributes to history-making events. Milton defended the Puritan Revolution; Wells and Doyle are Britain's apologists in 1914. Shakespeare mirrored the proud spirit of "this England" which

never did, nor never shall,
Lie at the proud foot of a conqueror.

Byron trod reflectively the soil of Waterloo and the Forum, Tennyson sang of Balaklava, Kipling of the "lands beyond the seas." Many are the opportunities in the history class for the exercise of literary appreciation. The Declaration of Independence, the utterances of Lincoln, Wilson's state papers should be accorded a comment or a question to suggest their worth. The President's revision of Eliot's epigraphs for the new post-office building are better examples than the rhetoric text can show of the way good English is written. Speeches like Secretary Lane's Flag-Day address should not be ignored simply because they are recent. The history teacher might also, at the proper time, remind the class that Lowell, Irving, Hawthorne, and Motley were in the diplomatic service, and that we have several men of letters abroad now.

As in literature, so in art. History, with its record of all "that man has ever done, or thought, or hoped, or felt," has a universal appeal to human feeling, and instinctively seeks emotional expression. Sculpture and painting have caught and preserved the pageant of the past as well as the feelings of the men of the past. Greek history, especially, should contribute to artistic appreciation.

We meet Phidias through his friend Pericles. We learn to know Vandyke through the courtly Charles I. We meet Houdon in the turmoil of the French Revolution. One who knows Lincoln must know also St. Gaudens, French, and Borglum.

Let us not, by over-systematizing, dehumanize the teaching of history. Change places with the students, not only in your mind, but actually in the classroom. Let them ask questions. Once or twice during the year, write out a 40 per cent examination paper. Hand copies to the class. Have them criticize and grade it. Let them "spell down" with short questions. Let them "play" Parliament and debate the Reform Bill.

History is a mosaic, rather than a geometrical, figure. It is "not a burdening of the memory, but an illumination of the soul." It is taught, in my opinion, most successfully, not by cut-and-dried formulas, but by intercourse which is natural, varied, vivid, and allusive.

Of course, history teaching is not vaudeville. Whether entertained or bored, the class must work hard. The teacher may dress the facts, but he must not disguise them. For, after all, truth is stranger than fiction; and it is also more valuable.

EDUCATION COURSES IN NEW ENGLAND COLLEGES

JAMES L. McCONAUGHY

Bowdoin College

Should education be taught as a college course? This question has aroused discussion and arguments pro and con in New England colleges, for twenty-five years. Probably no subject has entered the college curriculum which has had such energetic advocates and such vehement opponents. In other sections of the country the introduction of the courses in education has caused less comment; in state universities, closely allied to the state high-school system, little opposition could be raised to courses which aimed to train teachers for these high schools. In privately endowed colleges, however, in the more reserved East, where the spell of antiquity was more keenly felt and innovations more severely frowned upon, opposition to teaching education soon arose, and many of the more conservative New England colleges hesitated to add it to their curricula. Until 1900, departments of education had been organized in only six New England institutions. Since then eight more colleges have added such departments; eight others offer some work in education, generally in connection with the departments of philosophy or psychology; three offer no such work at all.

Education is a professional subject; it should be taught as such and its usefulness judged by the efficiency which it imparts to the college students who plan to teach. Objection was early raised to introducing a professional subject into the college curriculum; medicine and law were not taught there—why should education be added? The answers are two: First, teaching is the only profession which college graduates enter without some professional training, for even in business a five-dollar-a-week apprenticeship must be served to prepare the future business man for his responsibilities; teachers, however, are considered fully equipped if they can attach the magic B.A. to their names! Secondly, the efficiency

of the teaching in the secondary schools is directly related to the welfare of the college: if the Freshman has been ill taught, the task of the college is greater; if the newly graduated college man, wholly lacking preparation, fails as a teacher, the high school suffers, and the college whence this pseudo-teacher came is often blamed. Those who advocated the introduction of courses in education were often unwise in their enthusiasm; they wrongly urged that such instruction would prepare any college graduate to become an efficient teacher. Those who opposed the new subject knew that content was more important than method, and urged that they and thousands of other teachers had received no instruction in education; why then was it needed now? Where those in authority had breadth of vision, and where they realized that one mission of their institution was the preparation of secondary-school teachers and that while education could never make a teacher it could improve him and help him to use to better advantage all his college training—there courses in education were introduced. The institutions which did little toward supplying new recruits for the army of teachers, or which believed the old-fashioned equipment of a teacher sufficient today, held aloof—as many do still.

If the right test for courses in this new subject is the preparation they give the future teacher it is somewhat startling to realize that the subject most frequently taught as education was that which gives the least direct preparation—the history of education. There were many points in favor of this subject, however: it was definite and concrete, not in danger of being vague and uncertain as other possible education courses were then; it had texts and material already developed; it required little special preparation to teach an elementary course in the history of education; it was considered to have a cultural value. Accordingly nearly every institution introduced this subject first; many continue to devote most of their educational courses to historical material; in New England colleges more courses are offered in it than any other branch of education. No one doubts the value of this subject, although many are beginning to question its usefulness as a preparation for teaching. The historical approach is of interest and significance

to the future teacher, but from such a course he will learn little that will be of direct professional value to him when he is facing a noisy high-school class for the first time.

Doctors are trained by a direct study of the situations which they are soon to face alone; they serve as internes and study actual cases; interesting as the history of medicine might be, it is of little concrete value to them. Yet it is surprising to find how little attention is given, in New England colleges at least, to the study of the high school, to practice teaching, and to actual investigation of secondary-school problems. Indeed, with a very few exceptions, courses in history, or theory, or principles far outnumber the courses in secondary education. It may be rightly urged that these other courses have a direct bearing on secondary-school teaching. Yet the writer is firmly convinced that the greatest service he can do to prospective teachers is through a definite, concrete "laboratory" course in secondary education. The history of secondary education serves as an introduction to the course, and principles and methods are constantly discussed but always from the standpoint of the college graduate who is soon to begin his teaching career in the high school.

According to the report of the Bureau of Education there are 6,011 teachers in the public and private secondary schools of New England. Of these it is estimated that about 4,500 are college graduates. How many of these were directly prepared by their colleges for this work? Probably fewer than 500. State educational officials estimate that about one-fourth of these teachers are graduates of last year, who are thus beginning teaching without any experience at all. This means that next fall nearly one thousand positions in New England secondary schools will have to be filled by untrained college graduates. New England colleges will graduate next June fewer than 500 students who have taken a year's course in education. Probably the number of these who will teach outside New England will be larger than the number who come to New England to teach after graduating from colleges outside these states. Thus fully 500 young men and women will commence teaching next September without any direct professional preparation; undoubtedly a year's course in education would

increase their efficiency, let us say, 1 per cent; such an improvement in the secondary schools of New England would be notable.

The writer's interest in this problem led him to inflict another questionnaire upon his fellow-teachers of education in New England; the results are set forth in Table I. Returns were secured from the institutions which, according to the Educational Directory for 1913 (*U.S. Bulletin 557*), had "departments or professors of pedagogy." For the sake of clearness, the report from Radcliffe is given separate from that of Harvard University; courses in

TABLE I

	Total Student Enrolment in Education Courses	History of Education	Principles of Education	Educational Psychology	Secondary Education	Graduates Entering Secondary School Work	Percentage of Graduates Teaching
Boston University.....	*200	*44	*37	*62	.....	75	.....
Bowdoin.....	30	.....	.....	7	23	12	14.8
Brown.....	165	45	45	38	.....	30	30.8
Clark College.....	47	.....	.....	15	*16	14	.....
Dartmouth.....	23	.....	18	5	.....	23	16.2
Harvard.....	114	*3	34	17	*9	50	12.6
University of Maine.....	74	22	15	.....	5	22	.....
Middlebury.....	159	18	13	43	18	25	52.8
Mount Holyoke.....	286	30	93	51	.....	100	.....
Radcliffe.....	110	*13	44	34	18	25	.....
Simmons.....	*178	.....	*52	78	.....	*25	.....
Smith.....	*93	*8	*80	.....	.....	33	.....
University of Vermont...	*82	*28	*32	*7	.....	17	21.1
Wellesley.....	*235	*10	*198	.....	*2	112	.....
Yale.....	*10	.....	*3	.....	*1	53	12.8

*Indicates that a full year's course is given. All other courses are given during one semester.

Clark University are omitted as these enrol no undergraduates. The writer craves indulgence for any errors; it has proved very hard to catalogue, under the four headings selected, the various courses described by each institution. In each case the courses are for one semester unless the enrolment figure is starred, in which case a year's course is given. The total enrolment in education courses does not refer to different students; this number would probably be about 60 per cent of the figures given. The figures throughout refer to undergraduate enrolment only. The estimate of the average number of college graduates (with Bachelor's

degrees) who have gone into secondary-school work (sixth column of the table) is from material furnished by the colleges. The last column gives the percentage of graduates of each institution who were engaged in teaching of any kind for the years 1901-5 (except in a few cases where a somewhat earlier period had to be taken); the figures are from *U.S. Bulletin 491*. All the figures are for courses given during the college year 1913-14; in many colleges certain courses are rotated, so no report under a subject may mean that the course was taught the previous year (e.g., history of education, taught 1912-13 at Bowdoin, Dartmouth, Simmons, Yale).

Like all statistics, these are, in places, misleading. At Harvard, Yale, and Brown a large number of the students in education are graduates; at Yale many special students (public-school teachers) are enrolled and the work is all done in the graduate school rather than in the college; educational psychology is taught at Yale in the department of psychology and is not catalogued with the education courses. At Harvard and Radcliffe the work in secondary education is supplemented by actual teaching under supervision, probably the best type of practice teaching to be found in New England. At Boston University, Mount Holyoke, and Vermont, courses in the various high-school subjects are taught by those departments; at Mount Holyoke semester courses are given in English, Latin, mathematics, and music.

One must not overlook the work done in other New England colleges where there have been no actual departments of education organized. Rhode Island State offers three semesters' work in history, principles, and secondary education. Massachusetts Agricultural College has an excellent department of agricultural education offering courses in history, psychology, and rural education, thus giving a full preparation for the teaching of high-school agriculture. Tufts has a year's course, including principles and educational psychology. Wesleyan and New Hampshire both teach educational psychology; Bates and Colby each offer a year's work in education; Holy Cross gives four semester courses; Wheaton plans to add a department of education soon. Williams, Amherst, and Trinity offer no work in this field; few of their graduates become teachers.

Certain facts of interest develop from such an investigation. It is clear that the courses in philosophy of education no longer have much value or appeal to undergraduates preparing for teaching; only two courses are reported, with an enrolment of thirty. The history of education is enrolling fewer students than it did a decade ago, at least on the percentage basis. Courses in secondary education usually with observation and investigation of near-by high schools, and often with supervised practice teaching, are becoming more numerous and more popular. It is such professional courses as these, with their direct aim of preparing college students to become efficient secondary-school teachers, that will best justify the presence of education courses in our curricula and will do most to make these colleges of service to public education in New England. When courses of this sort are offered, the final problem is to secure the enrolment of every college graduate who expects to spend even one year as a secondary-school teacher. College appointment bureaus are gradually beginning to recognize the value of courses in education and to secure the best positions for those best prepared for them. State educational officials can also assist by putting a premium upon the college graduate who has had professional training; the new Maine teachers' certification law grants a higher-grade certificate to those who have studied education for four semesters. These requirements, and the courses in education which are offered, should be clearly and fully presented to students by the beginning of their junior year. Such an increase in the efficiency of the college in preparing its graduates for teaching, and an increased demand for such prepared teachers on the part of the certifying officials and those who employ teachers, will have definite results in the secondary schools of New England.

EDUCATIONAL NEWS AND EDITORIAL COMMENT

AN UNUSUAL REPORT

By some insane logic it is considered respectable for superintendents' reports to be very prosaic, very statistical, and very dull. Education, eternally human, eternally varied, eternally fascinating, to judge by the average board-of-education pamphlet, is as impersonal as Bradstreet or Destiny, a dehumanized state factory, a producer of citizens by some occult juggling of tables, budgets, desk-space, bills paid, and janitor service. How, indeed, from a priori reasoning, such documents could fail to be shot full of human color is beyond the incredible; but fail they always do. Obviously superintendents' reports and their like should be more fascinating than novel, play, or magazine; but practically they somehow come out of the coffee-mill of convention ground finer than the dustiest seashore sand—dry as the biscuit with which the Red Queen expected Alice to quench her thirst.

This being the case, it is with a thrill of gratitude that one lights on an educational bulletin not yet mummified. Such a document is the report of Thomas W. Churchill, president of the Board of Education of New York, bearing date of September 1, 1914. Extraordinary is not too startling an epithet for this production. In the words of an unconventional correspondent, Mr. Churchill "seems to be butting into education all the way from Ostend to Millhausen," "to be using search-lights not usually employed."

Whether it is a good thing to butt in all the way from Ostend to Millhausen, Mr. Churchill will prove in the sequel. We are interested for the present in his audacity in being human. As president, he does not regard himself as a kind of sublimated head-office-clerk. Many problems come under the presidential eye; some for a touch and pass, maybe, but in that brief touching there lies food for New York educators from now till September, 1915. Some will not like the food, but there will be new and healthy stirring ere better provender is found.

VOCATIONAL TRAINING

Vocational training, here made interesting by the very vastness of the problem, occupies the premier place in Mr. Churchill's pamphlet.

The subject itself is shopworn, but the "summary of recommendations" ending his discussion is at least practically illuminating:

To establish a bureau of school extension and co-operation with a director and assistant director, four trade supervisors, six district supervisors, a chief clerk, twelve stenographers, a hundred teachers, including those to be assigned as investigators.

To designate for management by this bureau six elementary schools for immediate introduction of a prevocational training in the fundamental operations and principles that are common to many trades, applied mathematics, the elements of machines, and knowledge of occupations; these schools to be organized on the plan of alternate use of the classrooms, shops, auditoriums, and playgrounds and to furnish from their shops such equipment for public schools as may be designated by the bureaus of buildings and supplies.

To designate, under the management of the bureau of school extension and co-operation, six schools in which older boys and girls shall receive instruction for skilled occupations and which shall introduce the co-operative system by which the pupils shall do actual work in manufacturing and commercial houses.

To extend, under the management of the bureau, the investigation of New York occupations.

The industries of New York, it is true, are an epitome of all industry; but in the emphasis on the plain fact so often forgotten, that vocational education must train for the immediate, the local, the necessary vocation, is much value. A similar survey of local industry in every city where vocational education is a branch of learning would result in bringing the balloon of propaganda much nearer the solid earth. Such a survey is recommended in the Chicago report noted below.

EDUCATIONAL SPECIALISTS

The following paragraph on educational specialists and their relation to the schools cannot be passed by:

The capitalized knowledge of the world is steadily increasing. If each new generation is called upon to assimilate what its predecessors had to master and, in addition, what has been learned since the school period of its predecessors, the curriculum will break down under its own weight. No work of this board during the past two years has been of greater public service than its application of the layman's common-sense to the accumulative theory of the educational expert. Excision has become a quantitative necessity. . . . But a deeper question than reduction is involved: If our schools are created to supply that training which is of the greatest value for community life, then the solution of our educational problem must lie less in the preparation of a

uniform body of information for all children. It must be found rather in an education that is best fitted to train a citizen who has not information and culture only, but the ability to earn his own living, and make his own way, as a man of character. There is no class of persons more competent to attack this problem than those who are in daily contact with the life of the city and its children. The experience of the scholastic, of the expert in book-learning and in the desiccation of knowledge for teaching purposes, may tend to isolate him from real needs of the world and may disqualify him in large measure for so complete a power over the training of humanity as traditional school practice has given him.

Wise words, these, and much needed, in a time when we are deluged with fads, theories, hobbies, and propagandas of all sorts!

FUNCTIONS OF THE PRINCIPAL

Nineteen pages of the report, by no means the dullest, are devoted to an unorthodox and refreshing symposium on the duties of a school principal, to which all types of school have by representative contributed. Many of the trenchant comments made are tempting, but space forbids the quoting of them. Room there is, however, for one or two on a petty but vexing problem not often noticed—the problem of the relation of superintendent and visitors.

"We have visits for information from the Gerry Society, court officers, teachers and principals from our own and other cities, superintendents, parents, students of teachers' colleges, newspaper reporters, insurance agents, dealers in school books and supplies, building inspectors, investigators, inspectors from the comptroller's office, supervisors of various kinds, directors and attendance officers," writes one contributor mirthlessly, and "as a matter of mathematics there is not time to attend to them," adds a second. With admirable restraint another comments: "The distressing thing about visitors is their wealth of time." "A persistent tradition leads the visitor always to insist on seeing the head man." What is the solution? Many principals urge that "office hours or office days be made a subject of discussion by the principals," a time agreed upon, and standing announcement made of office hours on cards to be issued to parents, a class of visitors which with the best of intentions seriously hampers the principal's efficiency.

"Apparently," says Mr. Churchill with regard to the whole symposium, "the great majority of principals want to be in classrooms, not ornamenting an office. They experience a real regret in being diverted from essential and constructive work and put upon supplementary and

unnecessary things." An obvious discovery—yet how many school boards ever find it out? "In this protest against uniformity," he continues, "I see a tendency not to be suppressed by rough-shod regulation, the expression of a natural instinct for intellectual freedom, that will be realized in experiment, improvement, and progress. It needs encouragement, not suppression."

Then follows the most courageous paragraph in the report:

I see no insuperable obstacle to giving to a principal responsibility and power similar to that of a captain of a ship so that he can, subject to the limitation of his financial allowance, organize his help, his hours, and his program of classes in accordance with his own judgment. This is no army. There is no campaign requiring equal advance all along the line. The demand for uniformity for pupils as a condition of transfer from school to school has not been proved. Principals tell me a child from Indiana or Maine, trained under different conditions, is adjusted to school conditions here without loss. The type of mind that centralized management is producing in our schoolmasters is not the one which the exercise of a principal's functions requires. We are not particularly concerned with the abstract question of the relative worth of a monarchical or democratic system in our schools, but we are interested in the sort of spirit animating our principals. We cannot remove them; we should not cripple them. We need the initiative of some as we need the conservatism of others. We can avail ourselves of differences of type and character among all; each will seek to serve the city best in accordance with his talents.

THE NEW HIGH SCHOOL

On high schools Mr. Churchill also has views. After a criticism of the high school as a preparatory school to college, he traces the disastrous effects of that ideal. His view is implicit in his phrase, "that portion of our school system containing grades higher than the eighth year." When the high school is cut off from the grades, and made an entity apart, the result is, in his judgment, unfortunate—"an adherence to type rather than [the] discovery of wider usefulness." "In these organizations the gladiatorial theory of existence," continues this singular president, "needs to give way before the more modern principle of public service; not so much the survival of the fittest but the fitting of the greatest possible number to survive." The high schools have been "under official encouragement to make their chief concern that small portion of the children which is preparing to enter colleges, universities, and professional schools. Through a centralized and restrictive management they have been taught that 'they are intended for and

should be confined to our boys and girls who are highest in book-learning.'"

The western high schools must be made the model for New York, and the president's specific recommendations are that each principal be given liberty to shape his own curriculum to meet the needs of his pupils; the board of education is "exhorted to dissipate the uniform requirements for graduation from high schools and to provide encouragement for each school through counsel of teachers and principals to arrange its own courses for the benefit of its own children subject to such requirements of economy of management as the circumstances require." And since the Regents' examinations stand in the way of this individualization of the high schools, Mr. Churchill promises to deal with them in a separate broadside.

We venture to submit that few high-school teachers will attend the funeral when the Regents' examinations die. A kind of *cursus honorum* they are, and as empty as that earlier Roman institution came to be. Whether or not great benefit will come from a closer union of high school and graded school is not so clear; something is gained by the pupil through his experiencing the two conventions of study and recitation, that of the grades and that of the high school. The high school is as near a college atmosphere as many pupils ever attain, and as such is obviously of great value. Indeed, in his enthusiasm for the practical, need of which he sees to be so distressing, Mr. Churchill has gone too far in his reaction from mere "book-learning," which is still a somewhat useful thing, with peculiar merits not to be gainsaid even by the business managers of whole continents of cities. Yet, with these and other reservations, the report remains a remarkable educational document; of significance for other cities, and for smaller schools; significant if it does no more than arouse a keener-edged discussion and perhaps the refutation of some of its implications.

H. M. J.

RECOMMENDATIONS FROM THE EUROPEAN TRIP

Returned from their extended study of European educational conditions, the delegates of the Chicago Board of Education have now made their recommendations. Evidently the lessons Europe has to offer the United States in education resemble the lessons it has to offer elsewhere: they merely urge us to do more thoroughly and efficiently the very reforms we have had in mind for a long time and have but

imperfectly carried out. In our school systems we have shown the same negligence and carelessness that characterize most of the affairs of our municipal life. Thus, if an American commission is sent to Germany to study municipal government, it returns with the recommendation that we do in a very much better way about everything that we are now doing. Our schools are to their schools as our cities to their cities. We are not sufficiently thorough.

None of the four main lines of recommendation made by the Chicago delegates introduces any new idea. They urge the city to guard school buildings against the distracting noises of the city and otherwise to provide for the physical welfare of the pupils; to establish a central municipal school of commerce and industry; to gather and systematize information concerning the industrial and commercial life of the city as a suitable basis for future educational policies, these policies to emphasize vocational and continuation training; and finally, to give to the elementary schools a larger share of school funds. In every one of these fields American school authorities have been dabbling. Europe exceeds us only in thoroughness and efficiency.

The recommendations are summarized as follows:

1. That the Board of Education request that the City Council shall enact such ordinances as will provide for the use of wooden blocks or asphaltum for the paving of streets adjacent to schools, and extending for at least a distance of one block from the boundaries of school premises. Also that in the construction or repair of elevated railways provision shall be made in the neighborhood of the schools for such solidarity of structure as will serve as a preventive of the excessive vibration to which disturbing noises are traceable.
2. That measures be taken as soon as may be practicable for the establishing of a central school of commerce and technology.
3. That provision be made for establishing a continuous evening school college.
4. That conferences be provided of officials representing the educational and the co-ordinate branches of the municipal government, whose office it shall be to investigate and to report on ways and means of further co-operation in the providing of playgrounds, swimming-pools, and other means of recreation.
5. That a plan be inaugurated for the establishing of an educational museum or center for the assembly of such materials and models as may be helpful to intelligent study.
6. That measures be taken to provide for the collection and tabulation of such information relating to the industrial and professional interests of Chicago as will be helpful as a means for determining plans of management and in establishing future policies for the schools.

7. That a survey be made to determine the relative and rightful claims of the elementary schools in our educational expenditures, and with the purpose in view of an adjustment of the apportionment of the public revenues to such an equitable basis as will conserve the interests of the schools of the common people.

8. That the creation and maintenance of vocational and continuation schools be encouraged, that opportunities be offered for the guardianship and instruction of all children who through necessity withdraw at an early age from the schools.

WE ARE AGAIN LESS INTELLIGENT

The report of the Chicago delegates illustrates one use to be made of foreign school methods; the following comparison illustrates another. It is of a type that has been dinned into us since we first discovered Europe, and the present instance is no better and no worse than a more familiar comparison. German schools have been persistently held up to us as models of perfection. Perhaps for this reason it is with something like relief that one reads of the virtues of English secondary schools.

The present exponent of the comparative method is Mr. George L. Fox, in a paper read at the Hampden County Teachers' Association. The report given of the meeting by the *Springfield Weekly Republican* quotes him as comparing the intellectual quality of American and English secondary schools to the distinct disadvantage of the former. We are so used to being told how stupid we are that it no longer stings; but to be told that we are more stupid in a new way has at least the merit of novelty.

In speaking of English secondary schools Mr. Fox defined them as the educational institutions where English boys and girls from thirteen to nineteen were prepared for the universities and medical schools, army and navy colleges, and business life. The classroom work at Rugby, the report goes on,

much surpassed work done by pupils of a similar age in this country. Written statements made by pupils of the work done in the school showed that the English boy before entering the university at nineteen covered in mathematics, classics, modern languages, and history as much as the American boy covers before going to college and in the first two years of the college course. Mr. Fox also read from the courses of study of different schools in proof of the same thing.

The grammar and practice in composition in ancient and modern languages are followed with a thoroughness and detail that is wholly unknown in this country. Passages from Shakespeare and George Eliot are often given for

translation into Latin to boys in the two highest classes of these schools, tasks which graduate students in American colleges would find it difficult to perform. The most talented pupils were trained in original composition in Latin and Greek.

The character of the examinations for scholarships in these schools and those for the Oxford and Cambridge school certificates showed far more difficult tests than are given to pupils of similar age in this country. Textbooks in different subjects, like algebra, geometry, trigonometry, history, classics, and modern languages, are so much more difficult than those used in this country that an attempt to use them here would meet with a most vigorous protest from pupils, parents, and teachers. The Rhodes scholars from the United States, though graduates of colleges, found themselves unable to compete with English boys just entering the university from the secondary schools, who were three or four years younger than they, in the great honor examinations of the Oxford schools. There is a great difference between the fearless and triumphant way in which the English boy faces and passes at different stages of his career difficult examinations, and the nervous alarm that many American boys feel when they attempt the much easier tests for entrance into college in this country, if they do not try to slip in by certificate.

Just how much value lies in all this is not very clear. A certain skepticism may be pardoned on one point: it is hard to believe that anywhere on this habitable globe examinations are faced in the "fearless and triumphant way" lauded by Mr. Fox, school-boy nature being much the same the world over. The Rhodes scholars are a point that strikes home. But the translating of Shakespeare into Latin proves little; American pupils very likely put the same mental energy into manual training or football.

Evidently the whole comparison hinges upon the relative homogeneity or heterogeneity of the scholars in English schools as compared with our own jumbled high-school constituency. In fact, with all due respect to Mr. Fox, his comparison illustrates the superficial nature of all such parallels. Because the English tradition requires an intensive study of the classic languages where the American emphasizes other subjects, it therefore does not follow that the brain stuff of English school boys is better than the brain stuff of American school boys. Textbooks, it is true, are a fairer basis of computation, but even they are not wholly satisfactory. Until the basis of comparison be made a more vital, a more comprehensive one; until some common and significant ground can be found upon which both sides may meet for comparison, we may fairly doubt the validity of these conclusions.

We may go abroad for certain practical suggestions, as did the Chicago committee, or we may go abroad as Mr. Fox does with an open,

but not a penetrating, mind, resolved to confess inferiority if we are indeed inferior, but forgetting to seek real bases for comparison. The unit of measure for a comparison of intellectual qualities must be the same in both cases; the qualities measured must have equal standing, must be exercised on tasks of somewhat nearly equal importance. Until we find the spiritual arithmetic which can cast up accounts so diverse as the minds of American and of English school boys, we can never hope for a true relative rating of our schools. And after all, what does it matter?

ASTONISHING GROWTH OF NIGHT SCHOOLS

The press is filled with announcements of the tremendous sweep over the whole country of the night-school idea. The figures of attendance are almost incredible. Richmond, Virginia, enrolls 4,000 students in 11 schools; Chicago has 35 schools with more than 25,000 attendance; St. Louis has 20,000 pupils in 22 schools; Milwaukee, 6,000 in 13 schools; Grand Rapids, Michigan, 4,000 students; Kansas City, 3,000; Minneapolis 7,000; and hundreds of smaller cities report that their night-school facilities are taxed to the utmost. Every city reports a rapid increase in attendance, the figures from St. Louis being typical of the general 50 per cent increase: in 1912 there were 9,700 students in St. Louis night schools; in 1914, 20,000. Chicago has 8,000 more at the opening of the year than the total enrolment for last year. Three years ago, Richmond began with 43 pupils and two teachers; in six months there were 800 pupils and 18 teachers. The school grew only about 100 the second year, but during the third year a system of co-operation between school and employers increased the attendance to 4,000.

The students who are thus attracted range in age from 14 to 65. There is no upper limit. By far the largest percentage are comparatively young men and women, roughly classified in three great groups: those who feel that they are handicapped by inadequate general education; foreigners who desire a command of English; and workers who wish to become more skilled in their occupations. The following data, collected from ten cities in Wisconsin exclusive of Milwaukee, indicate pretty fairly the general distribution of night-school students:

Men, 6,887; women, 7,389; total number enrolled, 14,276; those leaving, 3,030; withdrawals, 443; returned to regular school, 17; enrolment at close of school, 6,791; average weekly attendance, 6,712. Enrolment by employment: bookkeepers, 336; stenographers, 379; laborers, 637; students, 208;

housekeepers, 769; store clerks, 940; at home, 518; clerical work, 275; machinists, 469; carpenters, 124; factory workers, 1,796; electricians, 79; printers, 63; laundry workers, 33; helpers, 49; dressmakers, 127; telephone operators, 200; tailors, 17; milliners, 54; teamsters, 17; messengers, 14; plumbers and steam fitters, 11; candy-factory workers, 10; draftsmen, 121; molders, 49; painters, 35; blacksmiths, 27; cabinet-makers, 16; plasterers, 1; teachers, 290; pattern-makers, 18; waitresses, 426; librarians, 5; salesmen and women, 51; railroad employees, 29; delivery boys, 13; tinsmiths, 9; erectors, 13; type-setters, 3; storekeepers and business men, 197; domestics, 273; wood workers, 45; bakers, 9; rubber workers, 20; tanners, 41; farmers, 11; lumbermen, 31; nurses, 10; mechanics, 722; miscellaneous, 3,365; number of teachers, 328.

To meet the needs of this varied mass of students the widest possible variety of courses is offered. Principal Holmes of St. Louis Central High said to the 1,200 students enrolled in his night school:

If you want book learning or actual experience in any line, from the science of trimming bonnets to the plain and practical art of making calculations based on the fourth dimension, the night school will give it to you free of charge. If what you desire to know is not listed among the hundred and one things taught here, find nine others who have a similar yearning and we will find an instructor.

This promise of a class, provided ten people (20 in other cities) want it, results in what seems to be a conglomerate of courses of instruction. We find listed in various cities the following courses: sewing, needlework, cooking, common-school branches, millinery, architectural drafting, carpentry, orchestral work, chorus work, nursing for mothers, plain English for beginners, typewriting, stenography, business arithmetic, business English, bookkeeping, penmanship, freehand drawing, dressmaking, mechanical drawing, plumbing, all the high-school subjects, piano-playing, reinforced concrete construction, blue-print reading, electrical theory, Spanish, and so on indefinitely.

Here is a typical quotation on the subject of courses:

The opportunity for hustling Americans who can speak the native language of Latin-America to get a foothold there has made the Spanish classes popular. There were 200 in the room last night where that branch was taught. There were 210 pupils in one typewriting room and 160 in another at the same time, 370 in all. The classes in agriculture, mechanical science, shorthand, French, electrical and civil engineering also were large. A great percentage of the women pupils are taking millinery, dressmaking, and domestic science.

The expense per pupil is surprisingly light. The ten Wisconsin cities report an expense per pupil of \$7.35. In Minneapolis the expense is \$7.00. This low figure is possible because well-nigh the only expense

is payment for instruction. The school buildings are heated and the expense for lighting is low. Payment to teachers, who are usually employed in the day schools, runs from 65 cents to \$1.00 an hour. Minnesota allows each city six dollars for each night-school pupil under twenty-one years who attends the school 40 nights during the year. Out of 7,000 enrolled last year, 400 secured this aid to Minneapolis. This year the income of Minneapolis from this source is estimated at \$20,000.

In almost every city the school authorities attribute the success of the night-school movement in large part to the support of the employers of labor. In St. Louis employers are calling the attention of their employees to the schools and are urging them to take advantage of the opportunities offered. Notices are posted on bulletin boards in large plants and are distributed among the employees. "One large concern, which needs to employ numbers of new men from time to time, has arranged to call on the night schools for these men, believing that those who are interested enough to attend night schools will make the best employees."

Many indications point to the fact that any city may possibly obtain returns from its investment in night-school instruction, out of all proportion with the returns from day schools. One has only to realize that there are correspondence schools, charging very large fees, which enrol over 100,000 students, most of whom might be better served by resident instruction in their home towns. Moreover, any teacher who has taught in summer sessions knows of the deeper earnestness and effectiveness secured from classes of adults who have been at work, and who are able to see the relation between study and efficiency.

BOOK REVIEWS

A Spanish Grammar. With Practical Introductory Lessons. By ALFRED COESTER. Boston: Ginn & Co., 1912. Pp. vi+334.

This work deserves the careful consideration of every teacher of Spanish. The first part, divided into twenty-two lessons, furnishes sufficient grammatical material for the first year's work in high schools. This portion of the book contains few innovations, but follows rather the best models, perhaps most closely Fraser and Squair's *French Grammar*. Laudable points in Part I are: strict limitation of grammatical theory to the essentials, good drill exercises, abundant Spanish themes consisting of connected texts, questions on which to base colloquial drill, sentences for translation that are neither too abundant nor too difficult. Others may find, as the reviewer has done, that the later lessons are somewhat overloaded.

Part II is constructed on more original lines. The author has included in the systematic treatment of the various parts of speech only the details that the second- or third-year student should know, thus making a book for study rather than for reference. The difficult task of separating the essential from the unimportant has been done with skill, and the illustrative sentences are well chosen. The exercises, consisting of English sentences for translation into Spanish, are practical and to the point, rather than of the prize-puzzle variety so often found in advanced grammars. The vocabulary, however, occasionally fails to provide all the information necessary for the correct translation of the exercises. Although the author has rendered a real service to teaching in excluding the mass of detail that serves more often to confuse rather than to enlighten the student, he has still given too much rather than too little information. Many teachers will find it profitable to postpone the study of Part II until the class has done much more composition work than is provided for in Part I. It may also be of practical value to study the verb before the other parts of speech.

Chap. xvii, on the "Infinitive and Subjunctive Moods," is the least satisfactory in the book. The rules are indefinite, the examples are sometimes misleading, and the basis for the classification of the subjunctive is far from clear. A glance at rule § 277 (1) and examples under § 277 (1a) and (2), or rules and examples under § 278 (1) and (5) will show the justness of this criticism. The author should revise the chapter at the first opportunity.

The book is well printed, and for a first edition is comparatively free from typographical errors.

RALPH E. HOUSE

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Stammering and Cognate Defects of Speech. By C. S. BLUEMEL. Vol. I, "The Psychology of Stammering." Pp. 365. Vol. II, "Contemporaneous Systems of Treating Stammering: Their Possibilities and Limitations." Pp. 391. New York: G. E. Stechert & Co., 1913.

In these two volumes the author has attempted to present a complete theory of the cause of stammering and to review in a critical way the various systems that are now employed in this country and abroad in the treatment of this defect.

The first volume is an elaborate study of the physiology and psychology of speech. Special emphasis is laid upon the power of forming mental images. There is little or no discussion of the co-ordinations which are involved in producing speech. As one reads the discussions of this first volume he is impressed with the fact that the type of psychology accepted by the author is the type which was current a generation ago when the English association writers were the dominant writers in the field. The author has, to be sure, added a discussion of the various centers in the cerebrum which are involved in speech activity, but his interpretation of these physiological facts is entirely dominated by his imagery psychology. To a period of psychology which devotes itself very largely to the study of behavior, as distinguished from the study of imagery, the theories of the author will hardly be acceptable. The motor processes of speech certainly deserve to be considered as motor processes rather than as mere products of imagery.

The second volume is a very useful collection of statements regarding the methods employed in treating stammering. It also sets forth in vivid terms the methods employed by charlatans who practice upon victims of speech defects. The book gives a number of quotations from pamphlets of various doctors and various schools which make it appear that there is a great deal of untrained and unskilled tampering with this defect. The detailed exercises which are reported for the treatment of speech defects will be useful, not only to those who have to deal with actual defects, but to those who are engaged in training in clear articulation and expression among normal individuals. The second volume is less theoretical and very much less dominated by the author's special psychological point of view.

C. H. J.

Better Rural Schools. By GEORGE HERBERT BETTS and OTIS EARLE HALL. Indianapolis: Bobbs-Merrill Co. Pp. 512.

In the present movement for a new and more universal education, embracing the industrial aspects, the new book entitled *Better Rural Schools*, by Betts and Hall, is entitled to an important place. This volume is an exhaustive and thorough treatment of the problems of the rural school in America. An especial merit of the book is the wide range of actual rural problems that are taken up and treated in a sensible, suggestive, and constructive manner. The

style of the authors is simple, straightforward, and readable, the problems are clearly stated, and the suggestions for their solution are set forth clearly and concisely. Both the selection of the materials for the text and suggestions that are given for the solution of these questions could not have come from other than men who have had much experience and actual contact with the rural schools. The plan of the book with the discussion and study questions makes it well suited for a help to teachers in their work in institutes and public meetings, or for a private study of the modern problems of rural education. An appreciation of the importance and magnitude of the questions of rural education is shown by the authors, and the suggestions for a solution are not beyond the limits of possibility. In fact, very many actual illustrations now in successful operation throughout the United States are described and included in a well-selected list of illustrations. The modern demand for efficiency in every activity of life is set forth, and while the difficulties are fully apprehended, an optimism as to the final outcome and success of our developing American school system is expressed everywhere throughout the book. The curriculum of the rural school, old and new, is dealt with, the part and place of vacation work as a factor in the educative process is fully recognized. Every aspect of the teacher and the rural school, the questions of consolidation and administration of rural schools are taken up. It is made clear that the new rural school adequate to meet the needs and demands of the age just ahead of us will not be stereotyped or copied from another system and handed down to any community, but instead will be based on the actual resources and needs of the community it is to serve.

JOHN C. WERNER

MANHATTAN, KAN.

Introduction to Botany. By JOSEPH G. BERGEN and OTIS W. CALDWELL.
Boston: Ginn & Co. Pp. vii+368. \$1.10.

This book is written chiefly to meet the needs of those secondary schools that offer a short course on the study of plants. It is brief yet comprehensive enough to give the boys and girls who cannot go farther than the high school a meaningful understanding of their plant surroundings. If supplemented with the proper amount and kind of laboratory work the book can be used to the greatest advantage in any class taking only a short course in botany.

The earlier chapters give a general idea of the seed plant and its parts as a working unit. The succeeding chapters to xiii take up the work and structure of each part more in detail. Roots, food manufacture, transportation, and uses to plant, stems, and leaves (both ordinary and special forms), forestry, flowers and seed with their ecological phrases and relations to variation and hybridization are all given a rather terse but specific treatment. The latter part of the book discusses the evolutionary sequence with a very few types to show the series. The relations of plants to industry and a few points on weeds make a fitting close of a course of botany.

The practical values and applications of each phase are treated as soon as a topic is completed. Generally this is done in a special chapter, although in some instances it is taken care of in the discussion of the topic. This arrangement is a very commendable feature of the book. It reduces to a minimum the difficulty of seeing relations between plants and their economic values, whereas if the applications are left to the end of the course there is greater possibility for confusion.

The facts are well chosen and organized. They are stated in concise yet clear English. Enough detail is given to make the topics plain; the illustrations are carefully selected. For those schools that give only short courses this book no doubt will be found to be very serviceable. The introduction of the biography of some of the mileposts of botany is a good feature. These, if studied in their proper relations to plants, will certainly give the pupils a greater appreciation of the work in botany.

CHARLES E. MONTGOMERY

Vocations for the Trained Woman. By the WOMAN'S EDUCATIONAL AND INDUSTRIAL UNION. New York: Longmans, Green & Co. 8vo, pp. xiv+175. \$1.50, postage 16 cents.

This book is Part II of Vol. I in a series of studies in the economic relations of women being conducted by the department of research of the Woman's Educational and Industrial Union of Boston.

It treats specifically four vocations—agriculture, social service, secretarial service, and the business of real estate. Each study is based upon a specific survey, that of agriculture being limited to the state of Massachusetts, social service to New England cities and towns, real estate to the city of Boston and suburbs. The study of secretarial service includes cases from various parts of the United States.

The study of agriculture includes not only its general phases, but also poultry-raising, beekeeping, market gardening, dairying, greenhouse culture, and nursery culture. General conditions in each business are discussed, showing the difficulties and pointing out the qualifications necessary to success. Special attention is given to the peculiar problems to be met by women undertaking each kind of work.

In the field of agriculture it appears that poultry-raising offers exceptional advantages for women. Social work is a field of service for which women are pre-eminently fitted. While it does not command unusually high salaries, it offers other compensation. "The whole field of special service is demanding specialized training, and the day is not far distant when untrained workers will be welcome only as volunteers."

It appears that certain phases of the real-estate business offer excellent opportunities for the trained woman. It is believed that women are much better adapted to the renting of houses for residences than are men. Experi-

ence has demonstrated that women may do well in this and other phases of the real-estate business, especially in placing loans and mortgages.

In this field there is to be noted the difficulty of obtaining initial experience and the fact that this is most easily secured through the position of stenographer or secretary.

The book will find its place in the rapidly growing material which is being prepared for the vocational guidance of young women.

Classbook of Old Testament History. By GEORGE HODGES. New York: Macmillan, 1913. \$0.90.

This little book embodies the conservative results of recent Old Testament discoveries and scholarship. Its purpose is: "To reconect the Old Testament history in order and with clearness, and to bring to its interpretation the words of contemporary inscription and poetry and prophecy, for the better understanding of the Bible." It follows the Hebrews out of Mesopotamia into Egypt; out of Egypt into Palestine; gives a description of the United Kingdom; traces the course of events from the revolution of Jeroboam to the revolution of Jehu, from the fall of Samaria to the fall of Jerusalem; and under foreign rulers.

Dr. Hodges has attained his purpose, and we have an attractive story running through more than two hundred pages, beginning with Genesis and closing with events just after Ezra and Nehemiah.

The book was written for general readers and young people. Continual references are given to the passages which the paragraphs summarize and interpret. There are two maps, tables of dates, and an excellent index.

J. W. MONCRIEF

UNIVERSITY OF CHICAGO

Elementary Applied Chemistry. By LEWIS B. ALLYN, Department of Chemistry, State Normal School, Westfield, Massachusetts. Boston: Ginn & Co., 1912. Cloth, pp. xi+127.

Various school journals, for months past, have published articles dealing with the unusual opportunity which the chemistry teacher has to exalt the practical side of the school, and perform real services for the community. Chemistry as a basis for formal discipline meets with the approval of none of these modern writers. It is in the spirit of these views that this little book is written, and its purpose cannot be better stated than by quoting a sentence from a recent paper read by its author at an educational meeting: "Where can be found a more enthusiastic body of investigators than a class of chemistry students who do their work by the method of the *beckoning hand* rather than by the method of the *clenched fist*?"

This book is an invitation to a student to select his "unknowns" from home materials. Dealing, as it does, with practical tests upon substantially

every article of general home consumption, it cannot fail to awaken interest in parent and student alike. This interest will be born of real results—economy of money and preservation of health, for example—for there have been incidents in the reviewer's experience, using this book as a text, where the reputation of the grocer, the milkman, or the druggist as to honesty and truthfulness was largely dependent upon the reports of the chemistry class—they "were weighed in the [chemical] balance, and [sometimes] found wanting."

In the opinion of the reviewer, the study of this book should be preceded by a few months, at least, of a standard high-school chemistry course. It would be a most logical supplement, or substitute, for qualitative analysis especially for girls' classes.

H. A. WEBB

WEST TENNESSEE STATE NORMAL

Hymns for Schools and Colleges. By MARKHAM W. STACKPOLE and JOSEPH N. ASHTON. Boston: Ginn & Co., 1913. Pp. xxv+263. \$1.25.

Ginn & Co. have just published a hymnal which will prove to be a welcome addition to other school hymnals, for while these are many, very few have attempted to cover specifically a definite, limited field, as has the new publication.

The hymn book for schools and colleges was prepared to meet the chapel and Sunday-service needs of preparatory schools for boys and of colleges for men, where unison rather than part singing is desired. Hence the editors have kept in mind the meeting of these especial demands: that the melodies and words be such as to appeal to the average age of seventeen or eighteen; that, at the same time, they be of high musical and literary standard; and that they do not transgress the limitations of "moderate range, easy intervals, and simple movement."

These demands are successfully met by the editors. The words and melodies, for the most part, will lend themselves very readily to enthusiastic, whole-hearted singing. At the same time, the hymns are well chosen and capable of meeting exacting musical demands. While we note that in many cases words and arrangements are changed to meet the demands the editors have kept in mind, as above stated, it is in the matter of "range" that the greatest change in the hymns is noted. "Holy, Holy, Holy," "O, Mother Dear, Jerusalem," "Onward Christian Soldiers," and many other hymns that heretofore we have found to be pitched too high to be available for use in men's meetings are here transposed to lower and more available keys.

Aside from the questions of part singing and of the general advisability of the changes in signature such as have been mentioned, the book will prove to be a welcome addition to the list of school hymnals, especially in the particular field which it is intended to cover.

J. BEACH CRAGUN

UNIVERSITY OF CHICAGO

CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS^{*}

IRENE WARREN

Librarian, School of Education, University of Chicago

- Andress, J. Mace. Solving country life problems in Massachusetts. *Educa.* 35:91-95. (O. '14.)
- Bellamy, Raymond. A professor in a small college. *Atlan.* 114:608-19. (N. '14.)
- Bland, Henry Meade. David Starr Jordan and his message of peace. *Educa.* 35:77-81. (O. '14.)
- Boggs, A. M. Visualized opportunity. *Ped. Sem.* 21:445-53. (S. '14.)
- Brett, George P. The reading of books nowadays. *Atlan.* 114:620-26. (N. '14.)
- Brigham, Carl C. An experimental critique of the Binet-Simon scale. *J. of Educa. Psychol.* 5:439-48. (O. '14.)
- (A) children's market. *Outl.* 108:407-8. (21 O. '14.)
- (The) conduct of the universities. *Liv. Age* 283:378-80. (7 N. '14.)
- Coulter, Vincil C. The redistribution of the content of some high-school courses. *English J.* 3:490-99. (O. '14.)
- Curtis, Henry S. Physical training in the normal school. *Educa.* 35:82-90. (O. '14.)
- Day, Lorey C. Alphabet friendships. *Ped. Sem.* 21:321-28. (S. '14.)
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- Did Nietzsche cause the war? *Educa. R.* 48:353-57. (N. '14.)
- Dilworth, G. L. The electric high school. *Sci. Am.* 111:320, 325. (17 O. '14.)
- Feingold, Gustave A. Suggestions toward a study of mediocrity. *Ped. Sem.* 21:336-42. (S. '14.)
- Fitzgerald, Clara P. Notes on the scalp and hair. *Ped. Sem.* 21:329-35. (S. '14.)
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- Hailman, W. N. Adjustment of the common school curriculum to the present vocational needs of today. *Man. Train. M.* 16:129-38. (N. '14.)
- Hasty, Philip S. The present status of vocational work in the elementary school. *Man. Train. M.* 16:139-45. (N. '14.)

^{*} *Abbreviations.*—*Atlan.*, *Atlantic Monthly*; *Educa.*, *Education*; *Educa. R.*, *Educational Review*; *English J.*, *English Journal*; *J. of Educa. Psychol.*, *Journal of Educational Psychology*; *Lit. D.*, *Literary Digest*; *Liv. Age*, *Living Age*; *Man. Train. M.*, *Manual Training Magazine*; *Outl.*, *Outlook*; *Ped. Sem.*, *Pedagogical Seminary*; *Pop. Sci. Mo.*, *Popular Science Monthly*; *Psychol. Clinic*, *Psychological Clinic*; *School W.*, *School World*; *Sci. Am.*, *Scientific American*; *Teach. Coll. Rec.*, *Teachers College Record*; *Tech. World M.*, *Technical World Magazine*.

- Hay, Ian. The lighter side of school life. II-VI. *Liv. Age* 283. (10 O.-7 N. '14.)
- II. The house-master. pp. 85-92.
- III. Some form-masters. pp. 152-62.
- IV. Boys. pp. 225-34.
- V. The pursuit of knowledge. pp. 284-92.
- VI. "My people." pp. 338-47.
- Hörowitz, B. The ultra-scientific school. *Pop. Sci. Mo.* 85:463-66. (N. '14.)
- Keech, Mabel L. Our girls and their training. *Educa.* 35:95-98. (O. '14.)
- Kuno, Mrs. Emma E. How a knowledge of the characteristics of the adolescent boy may aid one in directing his conduct. *Ped. Sem.* 21:425-39. (S. '14.)
- Lyans, C. K. The doctrine of formal discipline. *Ped. Sem.* 21:343-93. (S. '14.)
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- Perry, John. The science of education. *Pop. Sci. Mo.* 85:504-15. (N. '14.)
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- Sanders, Frederic W. The organization of education. *Educa.* 35:98-106. (O. '14.)
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